the magazine of STANDARDS

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FEBRUARY 1960

the magazine of STANDARDS

Standardization is dynamic, not static. It means not to stand still, but to move forward together.

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A procedure to cut down the individual negotiations between industry suppliers and the Government and resulting deviations and waivers that reduce the effectiveness of Government specifications is suggested. The military need for higher performance and quality than required by most industry and national standards is recognized. A high-power industry advisory committee working with Government might improve communications between industry and Government and result in more effective standards, Mr Price suggests.

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ASA

THE COVER: Airmen enter intense fire on a test rescue mission in demonstration of recently developed protective clothing. Although "victim" and aircraft are dummies, the test otherwise reproduces an actual crash situation. Aluminum-coated clothing, such as that worn in the picture, could permit rescue of pilot and crew in cases when intense heat would normally make rescue impossible, Air Force officials point out.

notes

• ASA is giving serious attention to the suggestion that an advisory committee of industry representatives might help Government and industry to understand better their mutual standards problems and to develop standards that meet the Government's special needs (page 41). Invitations have gone to certain members of the Standards Council to form a committee that will study the proposal and report its recommendations to the Council.

• High performance requirements and reliability are, of course, the stumbling blocks in government-industry attempts to develop standards useful to both. The National Bureau of Standards announced in January that it is studying probability statistics to help in solving the reliability problem. NBS explains, "Because of the complexity of such systems [electronic computers, automatic control systems, and satellite instrumention], many unknown and uncontrollable factors influence their performance. Thus, some aspects of system performance have come to be treated as probabilistic phenomena."

As a result, the Bureau is studying problems in mathematical statistics and applied probability theory that arise in evaluating the reliability of complex systems.

The long-range goal of its studies, the Bureau explains, is "to make available a spectrum of approaches to model construction and a variety of statistical techniques, with accompanying criteria for selecting the most suitable method for a particular application."

• The Society of the Plastics Industry estimates that production of plastics last year amounted to 5,600,000,000 pounds of raw materials – 25 percent more than in 1958. The value of plastics products in 1959 amounted to approximately $3 billion. Work on international standards in this field is also increasing (page 50).

This Month's Standards Personality

Gunnar Palmgren

ONE OF THE WORLD'S OUTSTANDING DESIGNERS of ball and roller bearings, Gunnar Palmgren also qualifies as a world leader in bearing standardization. Mr Palmgren started his civilian career with the SKF in Gothenburg, Sweden, and has remained with the company ever since. Now retired from active service, he continues as consultant to devote time to the industry's standardization activity.

After graduation from the Swedish Royal Artillery and Engineering Academy in Stockholm, Mr Palmgren served as lieutenant in the corps of Swedish Army Engineers. He started with SKF in 1919 as engineer in charge of the mechanical section of the laboratory. Within three years he had been assigned to develop rolling bearings for hot and cold rolling mills and other equipment used in the steel industry. This involved development of completely new designs, which were gradually introduced in steel mills in many countries – Sweden, England, France, Germany, Japan, Spain, USA. This led to extensive travel to present his ideas to engineering societies in other countries. At this time he became known for his publications in English, German, and Swedish. The chapters on ball and roller bearing in current editions of the *Tool Engineers Handbook* and *Kent's Mechanical Engineers Handbook* are by Mr Palmgren.

In 1934, Mr Palmgren was named chief engineer of SKF Industries in Philadelphia and has made the United States his home ever since. He was promoted to vice-president in charge of engineering and research in 1951.

A firm believer in the benefit of standardization to all, Mr Palmgren has contributed much to industry, national, and international standardization. Since 1935 he has been a member, and for one term was chairman, of the Annular Bearing Engineers' Committee of the Anti-Friction Bearing Manufacturers' Association. He has been a member of the Roller Bearing Engineers' Committee of AFBMA since the committee was organized in 1940. For the last nine years he has been a member of the Mechanical Standards Board of ASA, and he represents AFBMA on Sectional Committee B3, Ball and Roller Bearings. He is chairman of two of the B3 subcommittees and was instrumental in introducing the principle of evaluating load rating by statistical methods, originally developed by his brother and a colleague and now incorporated in the recently published American Standard B3.11-1959. Mr Palmgren provided the leadership in this country for standardization in this area.

Mr Palmgren has represented ASA in international work on ball and roller bearings in Finland (1939), New York (1952), Sweden (1953), Madrid (1955), Vienna (1956), Naples (1958), and Berlin (1959). He hopes now to give even more time to travel and as well as to work in his garden. He also hopes to satisfy a long-standing desire to do some sailing in the waters around Sweden.

Standards to Suppo

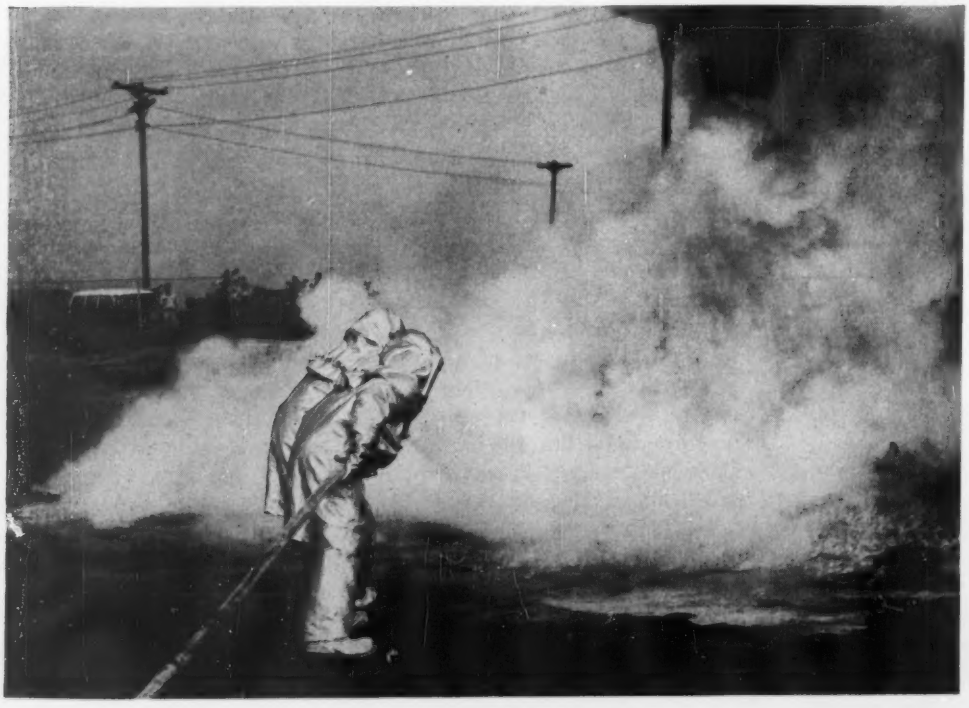
by the HONORABLE PERKINS MCGUIRE
Assistant Secretary of Defense (Supply and Logistics)

MR MCGUIRE'S PAPER, presented at the annual meeting of the American Standards Association, Hotel Plaza, New York, December 9, 1959, gives the Defense Department's views on use of standards for procurement. At the meeting of ASA's Standards Council preceding the annual meeting, an industry suggestion for improving communications between industry and government on use of standards was presented by L. D. Price, National Electrical Manufacturers Association. Mr Price's suggestion is published on page 41.

Following presentation of Mr Price's paper, the Council discussed his suggestion and voted to authorize the chairman to "appoint a committee of the Council to study the problem of better coordination between the federal government and industry in developing standards and explore the feasibility of a liaison policy committee program with the Department of Defense; and further that the chairman of the Standards Council communicate the problem to the Board of Directors."

A report of the annual meeting is published on page 42.

A test demonstration of aluminum-coated, heat-protective clothing, developed for the Air Force, shows how this type of suit permits firemen to move hose close to hottest part of the flame for most effective use.



ne Military Logistics System

SINCE WORLD WAR II, each military service—the Army, Navy, Air Force, and Marine Corps—has had its own supply system to support its operating forces. For more than a decade, we have been trying by one means or another to improve and integrate these supply systems. Progress has, at times, appeared to be slow. Criticism from many sources has been leveled at our supply system as being inefficient, cumbersome, and unresponsive. Many people have studied the problem and we have many recommendations how to achieve the basic objective of ensuring the optimum utilization of our resources. These recommendations range all the way from maintaining the status quo to a major reorganization of our entire supply system into what has been called a "fourth service of supply."

What are some of the things that brought about these recommendations? I would like to give you a few statistics which may help you appreciate the size and complexity of the defense logistics operation. Our military supply systems today have an inventory in warehouses and depots throughout the world valued at approximately $47 billion. This does not take into account capital equipment, such as planes and ships. These supplies and equipments are stocked and handled through approximately 2700 worldwide military installations. This vast, complex distribution network is in itself an obvious area in which to seek greater economy and better integration, just as you would do in your own business.

Each year, through new purchases and repair and overhaul, we push into this supply system about $15 billion worth of material. At the same time, the operating forces consume or wear out about an equal amount.

Let's look at this inventory from another direction. It has only been in the last 18 months that this second perspective became possible. We have eliminated one of the chronic problems of past years in managing this inventory by completing the identification and cataloging of all of our items of supply under a single system. Speaking of standardization, this is one of the most significant achievements we have made in securing uniformity. For the first time in history, every single supply item which is carried in our systems is uniformly named, described, and stock numbered so that the same item, regardless of who uses it or who made it, carries the same identity. The catalog system has revealed that we have over 3½ million different items separately stocked and managed in our supply systems and that these items have been manufactured and supplied by over 34,000 different companies. Today, this catalog system is identifying and stock numbering all new items before they actually enter our supply system. Over 500,000 new items are entering our supply systems each year. At the same time, an equal number become obsolete or surplus each year and are eliminated from this system. In fact, last year was the first year we took out more catalog numbers than we added, which shows that our management efforts are beginning to pay off. I am sure you appreciate that without a single identification language, few, if any, of our plans and efforts for improved efficiency and economy could be successful.

Looking at the problem from still another direction, our military supply systems are caught in the financial squeeze being brought about by the increased cost of new weapons, the rapid pace of new technological developments, and requirements to maintain the highest state of readiness with conventional weapons while new weapons are being developed and introduced. If you consider that today a single jet engine costs as much as a complete aircraft did 10 years ago and that, frequently, ground support equipment for a missile exceeds the cost of the missile by two or three times, you can appreciate the complexity involved in the introduction of new weapons and their spare parts into our supply systems.

WITH THIS BRIEF description of the size and scope of our defense logistics operations, I should like to discuss a few of our successful efforts to improve and integrate these vast operations.

First, with respect to integration, we know that there are many areas of materials and supplies commonly used throughout all of our Armed Forces in which more centralized management would create economies. For this reason, we have had in operation for the last several years what we call the "commodity single manager" concept for about 50,000 supply items. Under this system, one military department procures, stocks, and distributes material for all of the armed services.

The Department of the Army has been operating two of our commodity single manager systems—one

for clothing and textiles, and one for subsistence. The Department of the Navy has been operating two additional ones—one for medical and dental supplies and one for petroleum. We have followed the operations of these single manager systems closely. They have proven to be both economical and effective. They have already produced a one-time saving of over $235 million and they are saving us approximately $10 million each year. These savings have accrued primarily through reducing total inventories, eliminating concurrent buying and selling among the services, reducing cross- and back-hauls of the same material, and eliminating interservice procurement competition.

These commodity single managers have proven to be sound—so that we are now extending the concept into additional areas. These areas cover about one-half million supply items. The Army will operate as a commodity single manager for general supplies such as office supplies and equipment, furniture, hand tools, cleaning equipment and supplies, etc. The Navy will operate as a commodity single manager for industrial supplies such as hardware, paints, and metal bars and shapes. This means that industry will have only one place to deal with in the Department of Defense in these commodities. This decision by the Secretary of Defense to further integrate over one-sixth of our entire supply operation is a major step forward. It marks major progress under the President's Defense Reorganization Act of 1958.

We are constantly improving our inventory management procedures and stock level policies to reduce the over-all levels of inventories. As a result, our total inventories in store were reduced by $4 billion in the fiscal year 1958. This type of reduction permits us to re-evaluate our warehouse requirements. Since 1954, we have inactivated over 27 million square feet of warehouse space. We are scheduling 13 million more square feet for inactivation by the end of the fiscal year 1962. These are significant improvements.

BEFORE DISCUSSING the standardization impact on our logistic programs, I would like to mention one more important program, that is, our surplus disposal program. Last year, we disposed of $8 billion worth of surplus material measured at acquisition cost. We expect to dispose of $10 billion more each year and probably $12 billion each year for the next several years. About 40 percent of this material represents worn out or obsolete aircraft, ships, and other operating equipment. The remaining 60 percent represent spare parts, tools, accessories, and supply system materials.

As you can see, these figures tell another story; we know what is in our inventory, we know what the demands are across our system, and we have uniform supply and identification data across and within these systems so we can match supply and demand mechanically.

This is a big operation and any program which will reduce our costs and improve our merchandising will produce marked increases in our net return.

In terms of acquisition costs, our return from surplus sales is small; however, if you consider what it costs us to hold this stuff in our systems each year, the total return to us is substantial and the pay-off is big.

To further improve this return, we are establishing a series of integrated surplus property sales offices throughout the country—a maximum of 40. These will eliminate some 300 such offices which are currently in operation by the military services. We are establishing a centrally controlled national bidder's list to serve all military services. Effective administration of our surplus sales operations will continue to demand a major part of our attention.

From these examples of improved operation and organization you can see that we believe that the best over-all answer towards improving military logistics is to attack each functional area separately and to improve our procedures and systems, and at the same time to push ahead with integration of common supply activities and services where it will produce economies. Saying it another way, we do not accept the suggestion that a drastic reorganization of the Department of Defense is the panacea for our problems. We're afraid we would only be reorganizing our problems—not solving them. In recognizing this continuing need for improvement, the impact of effective military standardization upon our logistics operations should not be underestimated.

WE HAVE HAD an integrated standardization operation under way in the Department of Defense since 1948. Congress passed the Defense Standardization Act in 1952 which directed an extensive standardization effort across all the military services. This program has produced some excellent results. We have approximately 20,000 different military standards and specifications in use today. These cover all types of items from food and clothing through complex equipments. They cover inspection processes, basic materials, terminology, and engineering practices.

First, in the area of logistics standardization, we have reduced some 2,300 engine accessories that we procure and stock, such as radiators, thermostats, relays, gas caps, lights, etc, to 78 different items. We have reduced the number of tires and tubes stocked from 1,750 during World War II to 95. We have been able to reduce the range of rivets stocked from 5,900 to 211. In power transmission chain, we use 20,000 different types and sizes of which we carry 6,000 types in stock. Eight recently issued standards now reduce these to 1,100 different sizes and types in stock. If you consider that we save about $1 million a year in management expenses for every 1,000 items eliminated from our supply systems, these figures give you some

feeling for the attendant savings in such a standardization effort. Not all standardization, however, results in immediate reductions of items.

In the design standards area, we have reduced by 71 percent the different types and configurations of screw heads to be used in new design. This prevents unnecessary items from getting into the system. In the transistor area, by developing a series of specifications and standards, we were able to reduce transistor costs by 40 percent and increase the multiple application of standard transistors in equipments by 28 times. (This becomes important if you consider that we used 14 million transistors in the Department of Defense in 1958.)

In another area of engineering practices, we have recently issued a new military specification and standard which replaces 158 different Army, Navy, Air Force and Marine Corps specifications for engineering drawings. In the past, each military technical bureau, service, or command had its own system of prescribing engineering drawings and these were not interchangeable between activities. This means that a single manufacturer under contract to three different military departments has been required to redraw his engineering documentation for the same parts to satisfy the different military customers. The cost of engineering documentation to the Department of Defense has been estimated as high as $2 billion a year. This new specification standardizes engineering drawings across all military services not only as to size, but as to content, terminology, form, etc. I don't believe I need to discuss the attendant savings to us both in dollars and, equally as important, in valuable engineering time.

There are hundreds of additional examples I could mention where our standardization people, working closely with industry and its many associations, have produced excellent results. I believe we have made very significant progress; however, all programs have their problems and in the last 12 to 18 months, we began to notice several danger signals in our standardization efforts which we could not overlook. First, the standardization program was beginning to suffer growing pains; secondly, we found that many items that had been declared nonstandard were not leaving our supply systems fast enough; thirdly, we had evidence of undesirable duplication of effort within the military departments and between the Department of Defense and industry; and lastly, we were hearing some rumbles from industry that our specifications and standards were not being kept up to date with new developments. I am sure you appreciate that these points could not go unchallenged.

WE DECIDED to make a thorough study of our entire standardization program based upon experience gained during the past ten years. In doing so, as many of you know, we contracted with the American Standards Association to make an analysis of our specifications program. At the same time, members of my staff conducted a parallel analysis of our standards program. A summary of these studies revealed that we needed to make some basic improvements in our standardization operations and in the over-all concepts of our program.

First of all, there is a real question as to whether we could ever accomplish, and then maintain, military standards for all commodities as we had originally envisioned. We now realize we must concentrate our efforts in vital, high pay-off areas and must turn our backs to many desirable standardization projects which are not absolutely essential. Standardization resources are and will continue to be critical; therefore, we must concentrate our limited resources on the highest priority areas.

The studies further revealed that the standardization program was not sufficiently flexible or responsive to our development, production, and maintenance

U.S. Army Photo

One of the many problems of military supply is the maintenance of stock in field depots such as this wartime medical supply center in Korea.

people. We need an improved priority system whereby we can periodically feel the pulse of the standards users to determine what standardization projects are most needed. Too often, in the past, we have been giving equal attention to inconsequential projects on small commercial items of which we may be purchasing only a few thousand dollars worth each year and to multi-million dollar weapons systems, where we urgently need standards and specifications. Naturally the priority needs were being delayed. We also found that in the past there had been instances when we had not used available industry potential in our standardization efforts. We had too many military projects duplicating industrial projects and we had not been taking advantage of the wealth of technical competency in manufacturing industries and technical, trade, and professional associations.

Finally, we found that we needed to pursue aggressively an engineering standardization program to unify, to the greatest extent possible, environmental criteria, performance characteristics, and technical requirements for similar weapons and equipments at the development and drawing board stages, in order to preclude the need for standardization after the items are produced and in our supply system.

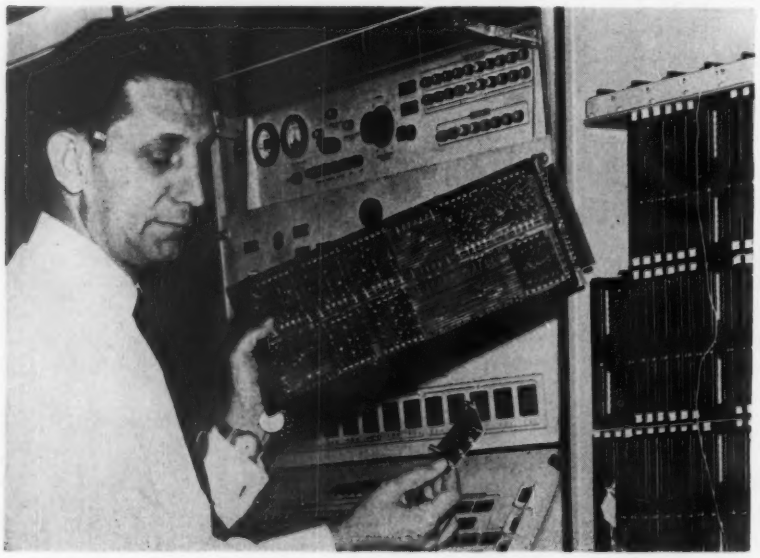
These findings, as well as numerous other operational improvements, are now being programmed into our standardization effort and will be in effect before July 1960.

Before closing, I would like to touch just briefly on our thinking in the area of using industrial standards. There are thousands of commercially available items used by the Department of Defense where we do not need military specifications or standards. All we really need is common sense procurement and management.

In the future, wherever possible, we intend to adopt industry specifications, standards and practices whenever they will meet our needs. We shall not establish duplicating or overlapping military efforts. Furthermore, we shall be seeking more industry participation in our future standards operations. In addition, under our weapons systems contracting program, we shall be giving prime contractors more responsibility for ensuring the use of standard parts and for developing proposed military specifications and standards required in the production and operation of the weapons.

IN CONCLUDING, I should like to say that we believe the past several years have shown us significant breakthroughs in our efforts to achieve the most efficient and economical logistics and supply concepts. The next several years are bound to produce substantial changes in military logistics. New technologies will require new concepts. At the same time, increasing pressures will occur for more improvements and integration, primarily dictated by the economic squeeze between rising costs and the necessity for modernizing our weapons. We believe we have made substantial progress to date. Our standardization efforts will play an ever increasing role in maintaining the quality and performance of supplies and equipments which we need and, at the same time, in ensuring that we procure, stock, and issue only those minimum varieties and types of items necessary to support the needs of our operating forces.

We intend to continue to bring these programs before the public. Maintaining a modern defense establishment is a complex and costly operation. The public should be aware of what it requires, the basic problems, and our progress. Our demands are frequently not peculiar. You, as businessmen, face many of them every day. As in the past, we shall continue to seek industry's cooperation, advice, and counsel in carrying out future improvements in military logistics.



Sylvania Electric Products, Inc.

Testing printed circuit card assemblies for MOBIDIC, mobile digital computer being developed for battlefield use by field armies. Equipment for this type of service must be capable of high precision performance despite rough handling and hard use. All such military equipment must meet standards far above the minimum frequently called for in industry and national standards.

A New Approach Suggested on Government-Industry Problems

by L. D. PRICE

MR PRICE is manager, Engineering and Safety Regulations Department, National Electrical Manufacturers Association.

WE HAVE ALL HEARD, and applauded vigorously, the Department of Defense statements of their policy to use industry standards, in so far as possible, as standards or as the basis of specifications for the procurement of material and equipment for use by the Armed Forces. This is splendid; as General Medaris so eloquently pointed out in his address to the 10th National Conference on Standards at Detroit, it is "a dynamic standardization program." In his address he pinpoints its four clearly defined mileposts.[1]

I have been asked to comment on the effectiveness of the relationship between industry organizations and the Department of Defense in reaching these mileposts. I do so from my observations in a trade association concerned with electrical equipment and as a result of discussions with representatives of other industry organizations. My objective is to stimulate discussion.

We have scarcely moved from the starting line. In too many cases we, in industry, have sat back and figured that all of our troubles, as far as the DOD is concerned, are over. Such is not the case.

Let us first explore briefly what is happening. Some, but by no means all, of the difficulties are summarized below:

(1) The DOD in many cases does not use existing industry standards, when there seems to be no logical reason for not using them.

(2) There are conflicting specifications issued by the several services and, in some cases, by different procurement offices within a single service.

(3) In some cases, the military agency to which the standards project is assigned by the DOD contracts with individual companies not directly affiliated with the affected industry to prepare proposed military specifications. In some cases the technical competence of the contractor in the field of the specification may be questioned.

(4) In other cases, the assignee activity prefers to work with individual suppliers instead of obtaining a coordinated industry point of view.

(5) There may be some confusion as to where to go to get an existing bad condition corrected. For example, it is extremely disappointing to hear some officer state, after considerable discussion of a problem, that the decisions have already been made and the discussion therefore has been academic.

Let me hasten to say that, in most cases, cooperation with representatives of the DOD is excellent and results are most encouraging. In too many cases, however, we misfire, with a resulting snafu.

The basic problem may be stated quite briefly. Too frequently the MIL specifications contain some specific requirements that are unrealistic, and that are virtually impossible to meet. Standard production products will not meet the specifications and individual negotiations are initiated between the manufacturers and the procurement officer to reduce to a minimum the special requirements. Deviations and waivers are granted by the procurement officer. The result is wasted time, effort money; and the questioned specification loses its effectiveness.

The fact that stands out is that there is inadequate communication between industry and the DOD. In many cases, this fault is compounded by inadequate communications within industry and within the DOD. As a practical result of what sometimes happens, I often wonder what a DOD directive from the Secretary means to a procurement officer in Oshkosh.

Let's look now at some of the causes of our troubles.

Why aren't industry standards used? Primarily they aren't used because they are minimum standards which, when specified, would permit the use of the lowest quality of product consistent with user needs. This generally is not good enough for the military, and I think we can all admit it.

[1]General Medaris outlined these mileposts as: (1) Adoption of the minimum number of sizes, types, or kinds of items and services essential to military operations; (2) Achievement of the optimum degree of interchangeability of component parts used in these items; (3) Development of standard terminology, codes, practices, and procedures to achieve common understanding and clear interpretation of the description of the items, practices, and procedures; (4) Insuring that engineering and purchasing documents concerning items for which we have logistic responsibility are consistent with the scope and objectives of the Department of Defense standardization program.

It is necessary that the military inform industry of the minimum acceptable characteristics of a product. Industry then has the know-how and the facilities to develop standards which will meet the military's requirements. These may differ somewhat from the industries' product standards, but when the more severe requirements of the military are understood, standards to meet these requirements can be developed and so identified. It is through a thorough mutual understanding between representatives of DOD and industry that this can be accomplised to our mutual advantage.

HOW CAN BETTER communications be established between industry and DOD?

First, let's tackle industry and DOD cooperation. It seems to me that an over-all policy-level industry advisory committee established within the framework of ASA to work with a corresponding and authoritative committee of DOD could lay the groundwork and might achieve this objective.

The industry advisory committee could be a small committee of informed industry representatives who know the areas of activities of the many standardizing bodies in the U.S. In other words—determine who can do a specific job most effectively and without duplication. This may or may not involve an ASA sectional committee, nor does it mean that in all cases the work, at least in its preliminary state, will be carried on through ASA procedures. To reconcile all user points of view with the military point of view at once may be too large an order.

The DOD committee would also be a group of qualified experts from the several services of sufficiently high rank that their "recommendation" would have sufficient weight to get results.

Thus, voluntary recognition and cooperation by industry through its advisory committee, and authority within the DOD of its advisory committee, could bring about the desired communication. Industry and the DOD would both be served.

While I have limited this discussion to DOD, I believe that it might work equally well with GSA on Federal Specifications. This is so particularly because many Federal Specifications are used for military procurement and many specifications developed by the DOD become Federal Specifications. Some such means of communication could eliminate the gripes of both the military and industry. It could result in better and more economical government procurement.

Many things could be brought into this discussion, but I believe it points to the primary cause of most of our mutual difficulties—lack of communication. With mutual understanding, the great majority of problems should disappear.

It would be within the province of the Standards Council to appoint a small committee to explore the feasibility of such a liaison policy committee program with DOD.

1960 Plans Forecast at ASA Meeting

THE 1959 ANNUAL MEETING of the American Standards Association, held December 9 at the Hotel Plaza in New York City, consisted of a meeting of the Standards Council, a joint luncheon meeting of member-bodies, Standards Council, and Board of Directors, and an afternoon meeting of the Board of Directors.

J. R. Townsend, special assistant to the director of research and engineering, Department of Defense, has been re-elected president of ASA for 1960, with Frank H. Roby, executive vice-president, Federal Pacific Electric Corporation, as vice-president. (For new and re-elected members of the Board of Directors see page 46.)

Requests for standardization projects from sources new to the use of ASA procedures have been of greatest significance in the work of ASA this past year, said President John R. Townsend in his report at the annual meeting luncheon. He mentioned the request for a project on mobile homes and travel trailers by the Mobile Homes Manufacturers Association; and a project on design of buildings and facilities that affect the use of public buildings by handicapped persons, requested by the President's Committee on Employment of the Physically Handicapped. "This expanding of the fields in which standards development under ASA procedures is being carried on can be expected to continue as more and more organizations find in the ASA the neutral forum which is so well adapted to the solution of standards problems—regardless of the field concerned," he said.

Next in importance Mr Townsend rated the increase in international standards work. There are more and more calls for American delegates to attend meetings of technical committees of the International Electrotechnical Commission, he pointed out. "More and more American firms in the electrical and electronics industries are recognizing the validity of these calls and responding to them by assigning highly competent personnel as delegates to these fruitful meetings," he said.

Mr Townsend believes that the international work on standards points the way toward greater understanding in the political field as well. He said:

"My experience at the Harrogate meetings last

year indicated that we could talk across the table to the Russians without difficulty. It seems to me this was very important. No technical standard or process is worth anything unless both sides can meet the truth.

"Let me emphasize the deep conviction that technical men, through their international role, may gradually lead mankind to some real, thought-provoking consideration of peace."

Mr Townsend pointed to the increase in the activities of the International Organization for Standardization as posing real problems for American industry, and particularly for the American Standards Association. "American industry is gaining in its appreciation of the worthwhileness of international standardization through the use of ISO procedures, but the work required is increasing faster than is this appreciation," he said. In particular, he pointed out, ASA should be in a position to send a competent staff man to assist the delegation at any ISO meeting. Strong criticism has been leveled at ASA for failure to provide staff assistance to its delegations in a number of cases. "This is a problem which is susceptible of solution by the simple application of money," Mr Townsend commented.

The Board of Directors has decided on a new approach to help solve the financial problems of ASA, and has selected the most experienced man available to ASA to carry it out. "Looking at the long experience in standardization and in ASA which marks the career of our deputy managing director, his incisive analysis of standardization problems, and his effectiveness in presenting the need for their support, the Board has confided this responsibility to Cyril Ainsworth, for many years technical director of ASA and now deputy managing director," Mr Townsend explained. Some funds have already been secured to provide an assistant to Mr Ainsworth. This assistant has been chosen from among the engineers on the staff. F. Crampton Frost, formerly in charge of materials and testing work, as well as building, will serve as Mr Ainsworth's assistant in the financing campaign.

"With the forced move to new quarters and the campaign for an increase in membership support, I am confident that ASA can look forward to 1960 as a year of expanding accomplishments," Mr Townsend declared.

Concerning the "forced move to new quarters" of which Mr Townsend spoke, Vice Admiral G. F. Hussey, Jr, managing director of ASA, reported as follows:

"The plans announced late last year for replacing the northerly Grand Central Terminal Building, in which ASA is located, with a 57-story building resulted in a steady stream of real estate agents at our office. Examination of potentially available space within reasonable distance of our present most favorable location resulted in the selection of space at 10 East 40th Street. Work is now under way and the space will probably be available to us late in January —a bare three months before the lease expires in our present location.

[NOTE: Since then, work on the new quarters has been delayed and the space will now be available for occupancy late in February.]

"At one time it had been contemplated that the ASA would seek quarters in the new United Engineering Center now being erected on First Avenue. Such a move would have been a return to the very pleasant relationships which existed while ASA was quartered in the present Engineering Societies Building on West 39th Street. However, when it became apparent that the United Engineering Center would not be available until late in 1961, while our present building would be torn down in early 1960, it was clear that unless ASA was prepared to accept the expense of making two moves, it would be sounder to seek space for relatively long-term occupancy. On this basis we have leased for ten years the ninth floor and part of the eighth floor of 10 East 40th Street. We look forward to welcoming our members and our other friends once we are settled in."

REPORTING to the American Standards Association on the activities of the International Electrotechnical Commission, R. C. Sogge, retiring president of the U.S. National Committee of IEC, called attention to the need "for a business-oriented viewpoint to be sure that the U.S. participation in an international project is approved by industry and that there is provision for taking care of expenses incident to having our representatives attend these meetings in distant countries."

IEC Recommendations have become recognized as more important in world affairs than ever before, Mr Sogge reported. "Representatives of IEC member countries who are also members of the new European Common Market have indicated that their countries expect to adhere to IEC standards in their efforts to consolidate both manufacturing and marketing efforts in this large area," he declared. "The seven countries of Europe outside the Common Market, who are organizing for similar expansion in their industrial development, are also strong advocates of IEC standardization. It was recently mentioned in an IEC meeting that increased effort should be made to make IEC standards available to all the underdeveloped countries for their guidance." And he commented, "Greater industrialization in other countries generally means greater, not smaller, opportunities for American business."

As a result, Mr Sogge believes, participation in this enlarged field of activity in the IEC "commensurate with the United States industrial position in the world may be more important to American electrical industry now than the idea of forming an IEC was in 1904."

Mr Sogge pointed out that the United States had been represented at the 1959 annual meeting of the IEC in Madrid, Spain, by 44 official delegates in 27 technical committees and subcommittees. "This denotes a substantial participation by well qualified individuals representing ASA sectional committees, trade associations, technical societies, and forward-looking industrial companies who made possible the manpower and underwrote the expenses for such attendance," he said. A subsequent meeting of two major technical committees in the electronic field, in Ulm, Germany, September 25-October 10, required the attendance of 24 additional delegates from the United States.

In his opinion, however, USNC should be in a stronger position as the representative of the United States in IEC. The United States is one of the member countries elected to the Committee of Action, which is the managing, or steering committee, which runs the IEC, he explained. He commented, "It is a little awkward for U.S. delegations in the Committee of Action or the Council to see delegations from other countries in a position to make decisions and accept responsibilities for undertaking Secretariat responsibility, or administrative responsibility, such as chairmanship in new technical projects, during the session, while with our present setup it is necessary for the United States to ask for time."

Some Comments by U.S. Delegates to IEC Meetings

"THIS WORK [on revision of IEC Publication 76, Power Transformers] has taken on increased significance with the recent adoption of IEC standards as the governing specifications in the newly formed European Common Market."–E. M. Hunter, U.S. delegate, IEC/TC 14, Power Transformers.

"Identifying the problem areas and assigning them to working groups contributed in a large measure to the successful completion of the work on monocrystalline rectifiers during the Paris meetings. This procedure was endorsed for future use by many of the representatives. When such procedure is followed, it is important that the USA send a sufficient number of delegates to participate in all of the separate working group activities, for we wish to receive full consideration of American proposals and points of view." –L. W. Morton, U.S. delegate, IEC/TC 22, Static Power Converters.

"My impression of the work of TC 25 is that strong American representation is needed if international standardization is to be significant in this field."–J. G. Brainerd, U.S. delegate, IEC/TC 25, Letter Symbols and Signs.

"It was definitely worthwhile to have a delegation at these meetings for the following reasons: (1) to support the presentation of the U.S. viewpoints to guide some of the standardization; (2) to get a first-hand view of some of the forces at work and to be on hand to lend emphasis to directions favorable to U.S. practice; (3) to get to know the representatives of the other countries–this helps in points 1 and 2; (4) to contribute in this technical area to the intangible but real value of the movement toward international cooperation and good will."–M. N. Waterman, U.S. delegate, IEC/TC 34, Lamps and Related Equipment.

"The most important action taken was standardization of a list of seven batteries for transistorized applications. No agreement was reached as to tests or performance requirements applicable to these batteries as there is a wide range of drains that apply in this type of equipment, and the problem will require further study before appropriate acceptable tests can be adopted. In the meantime, however, the fact that cell components, dimensions, and terminal details have been settled upon will be of major assistance in guiding designers of new transistorized equipment. Particularly from this standpoint, it was felt that real progress was made at this meeting."–F. J. Wolfe, U.S. delegate, IEC/TC 35, Primary Cells and Batteries.

"United States insulator manufacturers should actively support the work of TC 36 by sending representatives to the meetings of this committee. Such attendance is essential for proper presentation of the U.S. viewpoint and for its acceptance; also, knowledge of foreign practices and trade conditions of considerable value can be acquired. Continued neglect of such basically important participation can seriously handicap American insulator producers in the international market."–P. H. Chase, U. S. delegate, IEC/TC 36, Insulators.

"A great deal of work by many in the U.S. was done during the year to develop the U.S. documentation which maintains our position of active leadership in international standardization. As one measure of the supporting work done, and as a measure of the USA stature in standardization of electron tubes, we note that of the 78 documents involved in the Madrid SC39-1 operations, the most active contributors provided the number of documents below: Secretariat and Central Office 9; USA 9; France 8; UK 16; Japan 7; Netherlands 4; USSR 4; Germany 10; others 6. UK and U.S. proposals are intensively coordinated. The activity indicated shows that international standards will be strongly influenced by and will strongly resemble U.S. standards. Thus, the product we are equipped to manufacture in the U. S. is most likely to be acceptable in the export market." – M. A. Acheson, U.S. delegate, IEC/TC 39, SC 39-1, Electronic Tubes and Valves.

ASA's Standards Council

From a report by T. E. VELTFORT, *chairman*

MR VELTFORT is managing director of the Copper and Brass Research Association. He reported on the work of the Standards Council at the annual meeting of the American Standards Association, December 9, 1959. Following are excerpts from his report.

AN ORGANIZATION with the aims of the ASA—mainly to provide a systematic means for the approval of standards which are the best a nation can offer and to promote standardization as a means of advancing the national economy—needs many, many people behind it. Not to bore you with statistics—but merely to give you some idea of the number of persons who believe in ASA and what it stands for—there are 121 trade associations, technical societies, consumer groups, and the like, who are either member-bodies or associate members of ASA. In addition, there are well over 2,000 companies who have taken out company membership because of their interest in American Standards and the savings to their companies because of them. It is member dues which underwrite the cost of making American Standards available to all. And the technical services of more than 5,000 persons on ASA sectional committees and its innumerable subcommittees help with the job. Also, there are the thousands who serve on the committees of the member-bodies and other organizations who submit their standards for approval as American Standard under the Existing Standards Method of ASA.

A new member of the Standards Council may ask—where does the Standards Council fit into this picture? The Standards Council is the governing body responsible for the administration of the technical work. The member-bodies, as represented by most of you here present today, are the owners of ASA. On general policy matters and matters of finance, they operate through representatives voted by them to the Board of Directors—on technical matters they operate through individuals they appoint to represent them on the Standards Council.

Over the years, the work of the Council has been lessened considerably by the formation of standards boards—14 in all. These standards boards handle many of the time-consuming jobs formerly handled by the Council. In addition, there is the six-man Board of Review which acts for the Council in giving final approval to American Standards. It is at meetings such as the one today that these reports are presented to the Council for review, and may be discussed in detail. Appeals from the actions of a standards board or the Board of Review may be made at any time.

[Here Mr Veltfort reported in detail on actions taken during the past year, followed by a report on the Committee on Procedure, as follows.]

The principal items discussed [by the Committee on Procedure] in the last few meetings have pertained to procedural matters. Questions pertaining to the application and intent of the procedure have been reviewed by the Committee on Procedure and its recommendations have been acted upon by the Council. This is very important. It is assumed that the organizations represented on the Council became member-bodies of ASA because they believed such an organization was essential in the operation of the free enterprise system. They also believed that the methods, policies, and procedures had been soundly conceived and their administration by the Standards Council and Board of Directors had been in the best interest of all concerned. Many of them also did not lose sight of the increased prestige obtained through membership in ASA and through ASA's close association with other leading industrial and technical groups.

The procedural discussions have been of great value. It is the duty of the Council to guard zealously the fundamental principles on which ASA operations are based and to make sure that all actions are in the interest of the whole and not in favor of the few. While these policy matters will continue to come before the Council they will not be sufficient in number to justify frequent meetings of the Council.

The place of the Council in the operations of ASA is one deserving serious attention. I do not mean to indicate that the Council should reassume some or all of the duties transferred to the standards boards. In my opinion that would be a mistake. There may be matters of importance, however, into which the Council can put its teeth. For instance, we are too much inclined to assume that ASA is solely concerned with the development and approval of standards. We forget that ASA has an obligation to promote the use of American Standards—that ASA must promote standardization as a means of advancing the national economy. These are matters which the Council might look into to see if it can render a service. Governmental regulations in national and international

standardization are becoming increasingly important and deserve the attention of the Council. We are going to consider this in part a little later today. These and many other matters can be examined from the viewpoint of Council responsibilities.

As chairman of the Standards Council I urge every member to give serious thought to the work of the Council. Your comments and advice are genuinely desired. It must be remembered that the Council is the only agency in ASA that binds the member-bodies together. It speaks for all the members. It should become increasingly vocal in regard to any standardization matter of national significance. It should exercise its full prerogative to discuss any standardization matter considered by a member-body and associate member to be of importance to the full membership, or to the country as a whole.

While Federal Government Departments no longer have membership in ASA we hope that they will not forget that they played a strong role in the past in building ASA and the principles on which it operates. The coordinating function of ASA can be of valuable assistance to government standardization activities. Therefore, it is to be hoped that government departments also will not hesitate to make use of the Standards Council as a national forum for consideration of any matter on which the consideration of industry and technology would be of value.

New Board Members for ASA

Alfred Iddles

THREE NEW MEMBERS of ASA's Board of Directors took office January 1, 1960: Clifford R. Gillam, Alfred Iddles, and D. R. Hull. Another change in the Board's membership has also been announced—the retirement of Charles W. Bryan, Pullman Co, Inc, and his replacement by Miles N. Clair as nominee of the American Society of Civil Engineers.

Mr Gillam, president and general manager of the Buck Hill Falls Company and Buck Hill Water Company, was nominated by the American Hotel Association. A graduate of Swarthmore College with an A.B. degree in mechanical engineering, he has been active in hotel association work. He was president of the Pennsylvania Hotels Association in 1954, the association's fiftieth anniversary year. He has been director, secretary, treasurer, and second vice-president of the American Hotel Association, and chairman of a number of committees. Mr Gillam is permanent chairman of ASA Sectional Committee L24 on Institutional Textiles.

Mr Iddles, recently retired president of The Babcock & Wilcox Company, and past president of the Atomic Industrial Forum, has long been active in the work of the American Standards Association. He served as representative of The American Society of Mechanical Engineers on ASA's Standards Council for some ten years, and on ASA's Mechanical Standards Board from 1936 until 1947. He is serving on the Board of Directors as nominee of the Atomic Industrial Forum. A graduate of Michigan State College with degrees of B.S. and M.E., Mr Iddles has received the honorary degree of Doctor of Engineering from Brooklyn Polytechnic Institute, Michigan State College, and New York University.

Mr Iddles had been associated with The Babcock & Wilcox Company since 1937. Previously he had been a vice-president of Day & Zimmerman Engineering Construction Company and their successor company, United Engineers & Constructors, in Philadelphia. While in Philadelphia, he was associated with the

public utility companies, and was chairman of the Prime Movers Committee of the National Electric Light Association in 1932. He has spent most of his life in the design, construction, and operation of power plants.

Mr Iddles is a Fellow and past vice-president of The American Society of Mechanical Engineers, and a member of the Franklin Institute.

Mr Hull, vice-president for defense programs, Raytheon Manufacturing Company, is known for work in underwater sound and radar development. He is president of the Electronic Industries Association and was nominated for membership on ASA's Board by EIA.

A graduate of the U.S. Naval Academy, he served continuously in the Navy until his retirement in 1948. He was designated for engineering duty, specifically in electronics, and rose to the rank of captain. Prior to World War II, Mr Hull specialized in underwater sound and radar development. He was assigned to the Bureau of Ships as head of the Electronics Design Branch at the start of the war. He was advanced to deputy for electronics and finally to assistant chief of the Bureau for Electronics, the senior Navy position in electronics material. In this assignment he was responsible for the design, procurement, installation, and maintenance of all Navy electronics equipment. He received a Navy Commendation Ribbon and citation for his prewar work, and was awarded the Legion of Merit by former Secretary of the Navy James Forrestal for his service during the war.

David R. Hull

Mr Hull joined the International Telephone and Telegraph Corporation following his retirement from the Navy and in addition to his headquarters technical duties held the offices of vice-president and director of the Federal Telecommunication Laboratories and executive vice-president and director of Capehart-Farnsworth Corporation.

He joined the Raytheon Manufacturing Company as vice-president and general manager of the Equipment Operations in 1950, and was designated vice-president for defense programs in 1958.

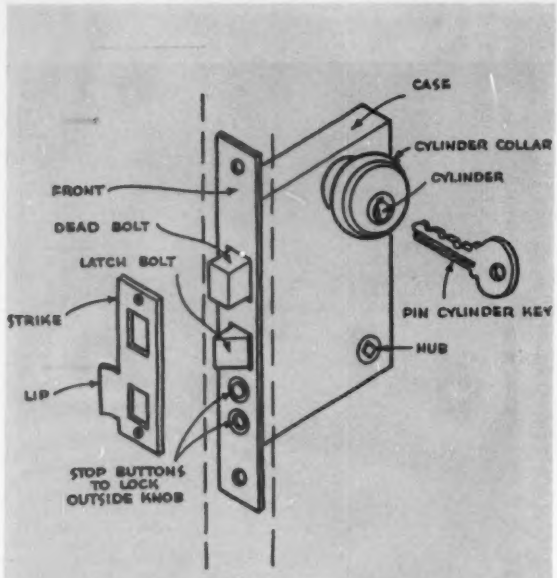
Mr Hull is a director of Technical Operations, Inc, Applied Electronics Company, Raytheon Canada, Ltd, Mycalex Corporation of America, Armed Forces Communications and Electronics Association.

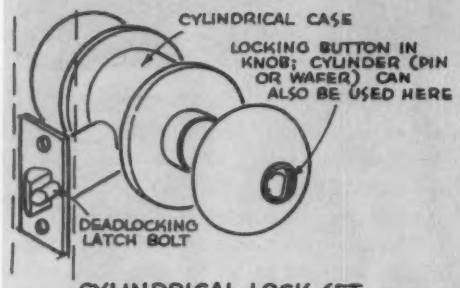
He is a Fellow of the Institute of Radio Engineers and the Acoustical Society of America, and a member of several other professional societies.

Mr Clair, president of the Thompson & Lichtner Co, Inc, of Brookline, Mass., will complete Mr Bryan's three-year term of office, which expires in December 1961.

Re-elected to membership on the Board for 1960 are J. H. Foote, chief engineer, Commonwealth Associates, Inc, and president of the American Institute of Electrical Engineers, nominated by AIEE; M. C. Harrison, president, Harrison Construction Company, Pittsburgh, member-at-large; M. J. Pitre, vice-president, Fidelity and Casualty Company of New York, nominated by the Association of Casualty and Surety Companies.

Clifford R. Gillam





CYLINDRICAL LOCK SET

Door Lock Mounting

New Standards Solve Problems for Manufacturers of Mass-Produced Doors and Door Hardware

by WILLIAM S. HASWELL, A.H.C.

Managing Director, National Builders' Hardware Association; Secretary, Sectional Committee A115

IN ORDER TO PERFORM its function, a door must be equipped with proper hardware. Hinges and lock, at the very least, must perform in such a a way that the door can be operated in a normal and convenient manner.

To accomplish this, both the hardware itself and its installation must be correct. Without proper installation, hardware of topmost quality, correct in every detail, will fail to perform as it should, and so will the door on which it is used.

For many years a workman known as a "finish carpenter" was the principal factor as far as hardware installation was concerned. He fitted and hung doors in all kinds of buildings, and his skill determined whether or not doors operated freely and hardware functioned as intended by its makers.

As long as most doors were made of wood and finish carpentry remained a hand craft, this system worked fairly well. When skilled carpenters became scarce, however, machine and power tools made possible adequate preparation of wooden doors and frames for standard hardware items on a production basis.

But when metal replaced wood as a door material on a substantial scale, an entirely new set of installation problems sprang into sight for both door and hardware people. Minor dimensional variations between comparable products of different makes took on an importance they had never had when the products were used on wooden doors.

These variants not only caused useless and extravagant cost increases for the door manufacturer, but they also produced friction in the market place by setting hardware distributors and door distributors at each other's throats, each convinced of the righteousness of his cause.

One reason was that mass-produced steel doors were being provided with hardware by the door manufacturer. While this solved his manufacturing problem, it also gave rise to severe sales difficulties. In some cases the finish of the hardware furnished by the steel door manufacturer failed to match the rest of the hardware in the room. In some cases the building owner required special keying characteristics for proper operation of his building, and in some cases the function of the lock furnished by the door manufacturer was incorrect for the use to which it was to be put.

The hardware distributor, faced with the loss of an important segment of his business, fought back by drawing attention to these shortcomings and advising architects and builders to avoid using such products. This opposition was but marginally successful, however, because of delivery and price factors.

Against the background of this unsatisfactory stalemate, talks leading to the establishment of standards for the installation of hardware were initiated between the Steel Door Institute, representing a group of standard metal door producers, and the National Builders' Hardware Association, speaking for builders' hardware distributors.

Help was enlisted from the Hardware Manufacturers' Statistical Association, whose membership includes many leading makers of builders' hardware. A joint committee was set up under the procedure of the American Standards Association. It was decided that locks and flush bolts should be considered first. Accordingly, committee meetings were begun in 1957 for the purpose of determining standard specifications for door and frame preparations covering these items.

Four American Standard specifications, approved October 8, 1959,[1] are the outcome of this joint endeavor. They specify the dimensions and placing of the locks and lock strikes (the rectangular piece of metal which is mounted in the door frame to provide a firm anchorage in the frame for the bolts, or to protect the frame from damage by the action of the bolts). They also include specifications for the shape and placement of the strike cutouts.

It is expected that metal door manufacturers will follow these standards in preparing standard doors and frames. February 1 has been given as the effective date for production to start in accordance with the standards. It is equally anticipated that hardware producers will make certain of their standard products to fit these dimensions, with March 1 as the indicated effective date. The hardware distributor will then be able to furnish the required hardware at the local job level, and the coordinating of finish, keying, and function can be accomplished.

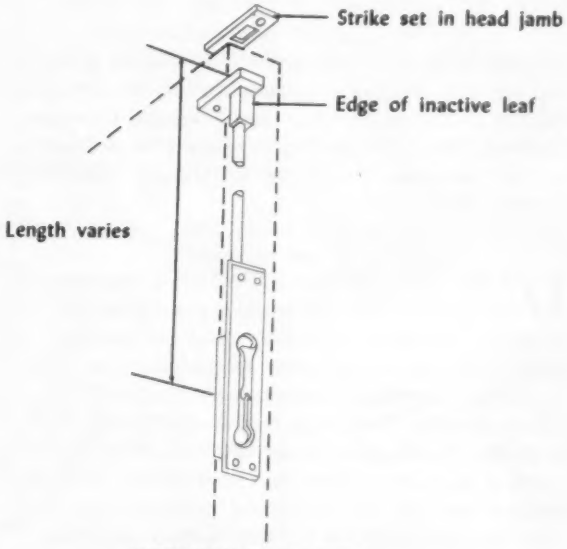
Another good purpose will be served by the adoption and use of these American Standards. When used consistently, the standard preparation of the door and door frame for installation of the lock will reduce manufacturing costs for both the door producer and the frame producer. This is particularly true of the standard lock strike preparation for 1¾-in. door frames.

Here the standard is the same in American Standards A115.1-1959 and A115.2-1959, so the frame manufacturer need not wonder whether mortise or cylindrical locks will be used, nor indeed, whether the doors themselves are to be metal, wood, or some other material. In all cases and for a wide variety of lock styles and types, the standard preparation will be correct.

This is an important forward step since early delivery of door frames is a requirement in most commercial and public buildings. By using the standard strike preparation, the frame supplier is no longer compelled to delay shipment awaiting receipt of an approved hardware schedule, since the hardware supplier can provide a standard strike with nearly all locks.

When doors are used in pairs and locks or latches are required, the inactive leaf must be bolted in place, usually by a device known in hardware circles as a flush bolt. Dimensional variations in this product have also been troublesome and needless. American Standard A115.4-1959 supplies a specification for preparation that could easily become standard for all metal doors, with a resultant saving in time and costs. Frame preparation is optional with this bolt, and may be accomplished on the job by the simple boring of a hole after the doors are hung.

The four American Standard A115 Specifications satisfy ASA requirements to the full in that they provide simplifications, eleminate delays and useless cost without limiting selection of style or quality. The interests of users are served, as well as those of producers and vendors, so the adoption of these standards can honestly be hailed as a "breakthrough" achievement in an area where standards have hitherto been notable chiefly by their absence.



EXTENSION FLUSH BOLT

L. CURTIS BOOTH, vice-president in charge of sales of the P. & F. Corbin Division of The American Hardware Corporation, was chairman of Sectional Committee A115 at the time these standards were developed. Mr Booth comments: "The committee, composed of representatives of the Steel Door Institute and The Builders' Hardware Manufacturers, illustrated what can be accomplished by cooperative action. The success of this first effort gave the two industries encouragement to expand the committee work for further exploration in the field of standardization." Mr Booth is also a director of the International Hardware Company of Canada, Ltd, subsidiary of The American Hardware Corporation.

[1] These American Standards are: Specifications for Door and Frame Preparation for Mortise Door Locks, A115.1-1959; Specifications for Door and Frame Preparation for Bored or Cylindrical Locks for 1¾-In. Doors, A115.2-1959; Specifications for Door and Frame Preparation for Bored or Cylindrical Locks for 1⅜-In. Doors, A115.3-1959; and Specifications for Door and Frame Preparation for Lever Extension Flush Bolts, A115.4-1959. The four standards, in a single volume, are available at $1.50 per volume.

ISO'S Plastics Technical Committee is among the world's most prolific industrial standards bodies. Its efforts in nine short years are beginning to satisfy growing needs for terms, methods of test, and specifications understood around the world. This means that importing, exporting, far-flung manufacturing, and exchange of technical information will become simpler and cheaper.

More Delegates...More Nations...More Work

by W. E. BROWN

MR BROWN, chairman of the U.S. national committee for ISO Technical Committee 61, is with the Plastics Technical Service, Dow Chemical Company, Midland, Mich. He was leader of the USA delegation to the committee's mee'ing at Munich, Germany, October 26-31, 1959.

DELEGATES FROM COUNTRIES representing more than half the world's population met in Munich, Germany, October 26-31 at sessions of ISO/TC 61, the International Organization for Standardization Technical Committee on Plastics. Continuing the work of developing commercially useful standards for plastics, more delegates from more nations[1] worked on more subjects than ever before. Most significant was TC 61's continued production of Draft ISO Recommendations for test methods and nomenclature (see figure). Several of these internationally agreed upon methods are in print[2] and several more will be available soon.

Typical was the progress made by the new specifications working group in its first meeting since it was organized a year ago in Washington, D.C. Representatives of 12 nations agreed on how plastics specifications should be written and what materials should first be considered.

Eight other working groups approved 14 methods to be sent to the committee for balloting. In addition, 37 items on the program of work were discussed.

Four new Draft ISO Recommendations were approved at Munich for letter ballot of the 41 ISO member countries:

Determination of the Vicat softening point.
Viscosity number of polyamide resins in solution.
Determination of the acetone soluble matter in phenolic molding materials.
Thermal stability of polyvinyl chloride and related copolymers and their compounds by the discoloration method.

These bring to 33 the total of Draft ISO Recommendations approved by TC 61 for final preparation as internationally sanctioned methods.

Six Draft Proposals (forerunners of Draft ISO Recommendations) were approved for letter ballot of the 34 TC 61 nations:

Method of test for tensile properties of plastics.
Maximum temperature and time taken for temperature to rise during setting of unsaturated polyester resins.
Determination of stiffness properties of plastics as a function of temperature by means of a torsion test.
Resistance of plastics to natural light.

[1] The total number participating was 111, as follows: Participating member-bodies: Belgium (1), Czechoslovakia (6), France (12), Germany (15), Hungary (1), India (2), Italy (15), Japan (4), Netherlands (4), Poland (4), Sweden (10), Switzerland (8), United Kingdom (8), USA (12), USSR (4); Observer member-bodies: Norway (1), Turkey (2), Yugoslavia (2).

[2] Available from the American Standards Association, Inc, 10 East 40th Street, New York 16, N. Y.
ISO/R 59, Determination of the Percentage of Acetone Soluble Matter in Phenolic Moldings
ISO/R 60, Apparent Density of Molding Material that Can Be Poured from a Specified Funnel
ISO/R 61, Apparent Density of Molding Material that Cannot Be Poured from a Specified Funnel
ISO/R 62, Determination of Water Absorption
ISO/R 75, Temperature of Deflection Under Load

Changes in mechanical properties after contact with chemical substances.

Resistance of plastics to light from the carbon arc.

USA DELEGATION

Robert Burns of the Materials Advisory Board, National Academy of Sciences, Washington, D.C., and a member of the USA National Committee for ISO/TC 61,[3] served as chairman of the meeting. He was assisted by Professor Dr Arthur Zinzen, Director of Deutscher Normenausschuss (the German standards organization) and by the TC 61 Secretariat staff, Dr N. A. Skow of the Society of Plastics Engineers, Bert S. Montell of the Society of the Plastics Industry, Incorporated, and Curt Mohr of Deutscher Normenausschuss.

Members of the USA delegation were:

W. E. Brown, The Dow Chemical Co, Midland, Michigan, *Chairman*
C. H. Adams, Monsanto Chemical Co, St Louis, Missouri
Robert Burns, National Academy of Sciences, Washington, D.C.
Thomas Hazen, Union Carbide Plastics Co, Bound Brook, N.J.
I. L. Hopkins, Bell Telephone Laboratories, Murray Hill, N. J.
G. M. Kline, National Bureau of Standards, Washington, D.C.
B. S. Montell, The Society of the Plastics Industry, Inc, New York, New York
N. A. Skow, Synthane Corporation, Oaks, Pennsylvania
A. C. Webber, E. I. duPont de Nemours & Co, Inc, Wilmington, Delaware
P. E. Willard, Food Machinery and Chemical Corp, Baltimore, Maryland
R. K. Witt, Johns Hopkins University, Baltimore, Maryland
E. Y. Wolford, Koppers Company, Inc, Pittsburgh, Pa.

WORKING GROUP 1. NOMENCLATURE AND DEFINITIONS

The final document of over 800 terms giving equivalent terms in the official ISO languages, English, French, and Russian, was readied for publication. This compilation, the first of its kind, also contains equivalent terms in German, Italian, Polish, and Spanish. A corresponding list in Czech should be ready in 1960. Abbreviations for use as markings on articles made of plastic to identify the type of plastic used are being studied with the International Union of Pure and Applied Chemistry. Coordination of work on definitions for materials has been started with ISO's technical subcommittee on plastic pipe, ISO/TC 5/SC 6.

WORKING GROUP 2. MECHANICAL STRENGTH PROPERTIES

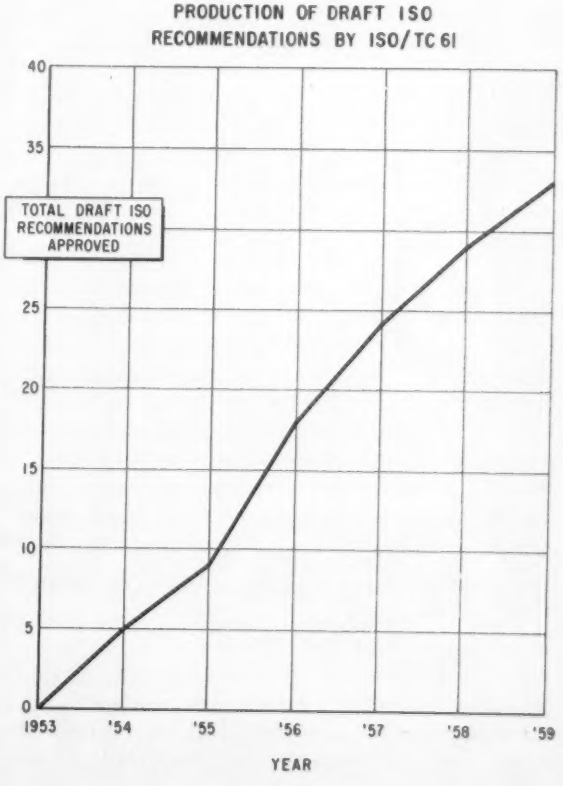
Working Group 2 approved Draft ISO Recommendations for Charpy and Izod impact flexural methods and a Draft ISO Recommendation on determination of flexural properties of rigid plastics. Task groups were established to develop better impact strength methods, to study three types of torsion pendulum apparatus, to work on a new method for modulus of elasticity and to test a method for compressive properties of rigid plastics.

WORKING GROUP 3. STANDARD LABORATORY ATMOSPHERES AND CONDITIONING PROCEDURES

A proposal for producing specified relative humidities in small enclosures will be prepared by representatives of France, Germany, Netherlands, United Kingdom, and USA. ISO/ATCO, the ISO coordinating committee on atmospheric conditioning for testing will be involved in this work. A proposal from IEC/TC 15[4] on conditions for resistivity and insulation resistance will be studied.

[3] The United States member-body of ISO/TC 61 is the American Standards Association (ASA). The ASA, in addition, serves in the important roles of Secretariat for ISO/TC 61 and liaison with the UN in which ISO has consultative status. ASA, however, looks to the industry for technical guidance. The latter is supplied by the USA National Committee, ISO/TC 61, a subcommittee of ASTM Committee D-20 on Plastics. The USA National Committee draws its membership from ASTM Committees D-9 (Electrical Insulating Materials) and D-20, The Society of Plastics Engineers, The Society of Plastics Industry, Incorporated, and The Manufacturing Chemists Association. USA delegations to TC 61 meetings are named by the USA National Committee.

[4] The International Electrotechnical Commission, Technical Committee 15, Electrical Insulating Materials.



WORKING GROUP 4. THERMAL PROPERTIES

Working Group 4 recommended approval of a Draft ISO Recommendation on incandescence resistance of rigid self-extinguishing plastics. Under study are proposed changes in the Vicat apparatus, flammability of thin films, melt fluidity of thermoplastics and thermosets, low temperature brittleness tests, and softening point of thermosetting plastics. A new task group on melt fluidity of polypropylene was established under leadership of the Italian delegation.

WORKING GROUP 5. PHYSICAL—CHEMICAL PROPERTIES

Methods for determining the percentage of chlorine in vinyl chloride polymers and copolymers, percentage of monomer, and low molecular weight polymer in polyamides and index of refraction of transparent plastics are under study. Methods in preparation include determination of water content of polyamide resins, acetate content of vinyl chloride-acetate copolymers, and viscosity of concentrated polyamide solutions.

WORKING GROUP 6. AGING, CHEMICAL AND ENVIRONMENTAL RESISTANCE

Methods for testing thermal stability and bleeding of colorants will soon go forward as Draft ISO Recommendations. Czechoslovakia, France, Hungary, Poland, Switzerland, UK, and USSR are continuing work on biological attack of plastics. Methods for testing the resistance of polyethylene to stress cracking will be studied by a new task group drawn from Czechoslovakia, Italy, Germany, Netherlands, UK, and USA. Information on stress cracking of other materials such as polypropylene, polymethyl methacrylate, and polystyrene will be collected by the working group. Reports on tropical tests and weathering are also being collected for development of test methods.

WORKING GROUP 7. PREPARATION OF TEST SPECIMENS

Working Group 7 will collect information on test specimen requirements of other TC 61 working groups to permit further development of suitable preparation methods. Conditions for making compression and injection molded specimens of several materials are established in three Draft ISO Recommendations previously approved. Future interest will therefore be in cutting, machining, stamping, and other methods as the plans of Working Group 9 (Specifications) develop.

WORKING GROUP 8. ELECTRICAL PROPERTIES

Working Group 8, an advisor to TC 61 on methods developed by IEC/TC 15, approved conditioning methods for resistivity and insulation measurements recommended by IEC. Future work includes methods for measuring corrosion of metals in contact with plastics under continuous electrical potential, examination of IEC methods on electrical testing of solid insulating materials relevant to plastics, and collection of information on the reliability of tracking tests.

WORKING GROUP 9. SPECIFICATIONS

Working Group 9, authorized in 1958 with a scope covering preparation of specifications for identification and quality control, met for the first time in Munich. It was agreed that an ISO specification on plastics should include the properties to be measured, appropriate test specimens, and test methods to be applied. Limiting values of the properties will be considered later.

Initial work will be on specifications for phenolic molding compounds, rigid PVC (polyvinyl chloride) compounds, and industrial phenolic laminates. Suggested properties to be measured will be studied by the national committees for consideration at the 1960 meeting.

WORKING GROUP LEADERSHIPS

Following the 1960 meeting, the leadership of Working Group 3 will be transferred from India to The Netherlands and the leadership of Working Group 5 will be transferred from The Netherlands to Italy.

Other working group leaderships are distributed as follows:

Working Group 1.	United Kingdom
Working Group 2.	Germany
Working Group 4.	France
Working Group 6.	Czechoslovakia
Working Group 7.	USA
Working Group 8.	Sweden
Working Group 9.	Switzerland

CELLULAR MATERIALS

A resolution was passed that the secretariats of TC 61 and TC 45 (ASA and the British Standards Institution) work out details for organizing joint study of the growing interest in cellular materials.

LIAISON WITH OTHER COMMITTEES

Close coordination among the many ISO technical committees is necessary to assure development of nonconflicting standards. In line with this, ISO/TC 61 continued its policy of expanding liaison representation with other ISO committees when needed. Thus, liaison representation with ISO/TC 5 Subcommittee 6 on pipes and fittings of plastic materials for the transport of fluids will be expanded to three TC 61 members, from Germany, Netherlands, and USA. Technical Committee 61 also maintains liaison with ISO/TC 45 on Rubber and with IEC/TC 15 on Electrical Insulating Materials, and retains membership in ISO/ATCO on atmospheric conditioning for testing.

FUTURE MEETINGS

The committee will meet in Prague, Czechoslovakia, in 1960, and has been invited to Turin, Italy, in 1961, and Breslau, Poland, in 1962.

New Books . . .

SCREW-THREAD STANDARDS FOR FEDERAL SERVICES, 1957, PART II. *Issued November* 1959. *National Bureau of Standards Handbook H28. Partial amendment to NBS H28* (1944) *and to Supplement* (1950). 119 *pp. Superintendent of Documents, U.S. Government Printing Office, Washington* 25, *D.C.* $0.75. This volume is the second of a series of three into which the 1957 edition of the Handbook is divided. It covers standards for pipe threads, including dryseal pipe threads; gas cylinder valve outlet and inlet threads; hose coupling, including fire-hose coupling threads; and hose connections for welding and cutting equipment.

Part I, published in 1957, includes standards for screw threads which are commonly applied to bolts, screws, nuts, and other similar fasteners. Such threads are variously designated as Unified, American, American National, and Unified miniature threads. Part III is in process of development and will include standards for acme, stub-acme, buttress, and miscellaneous threads.

The Handbook is based on the 1933 and earlier reports of the National Screw Thread Commission and on NBS Handbooks H25 (1939) and H28 (1942 and 1944), together with pertinent standards approved by the American Standards Association.

YEAR ROUND CONCRETING. *AIA File No.* 3-B-2. 8 *pp. Calcium Chloride Institute,* 909 *Ring Building, Washington* 6, *D. C. Free of charge.* The pamphlet summarizes the new American Concrete Institute's standard recommendations for cold-weather concreting. It includes sections on accelerators, preparation before concreting, winter concreting objectives, and production required. A two-page chart illustrates data on effect of 2-percent calcium chloride at temperatures of 73, 55, 40, and 25 F on Type 1 and Type 3 cement.

TOOL ENGINEERS HANDBOOK. *Edited by F. W. Wilson and P. D. Harvey. Second edition. September* 1959. 6 *x* 9. 2289 *pp.* 1709 *illustrations. McGraw-Hill,* 330 *West* 42 *Street, New York* 36, *N. Y.* $19.50. This revised and enlarged edition of the Handbook was prepared under the supervision of the American Society of Tool Engineers' Technical Publications Committee. It presents the latest in tool design, fabrication, maintenance, and utilization. The impact on the industry of such developments as automation, numerical control, electromachining, trepanning, shell molding, and learning curves has been considered in treating everything from product design and cost estimating, through the selection of machines, processes, and tools to the analysis and improvement of setups and operations. Spark machining, electrolytic grinding, surface cleaning by supersonics, and hundreds of other comparatively recent topics are covered. Frequent reference to American Standards is made in the Handbook.

NATIONAL FIRE CODES. 1959. 6 *Volumes.* 5280 *pp. National Fire Protection Association, Boston, Mass.* $7.00 *per volume, complete set* $35.00. Changes in fire safety standards are incorporated in this revised edition, a compilation of the 177 standards developed by NFPA in the fields of flammable liquids and gases; combustible solids, dusts, chemicals and explosives; building construction and equipment; extinguishing equipment; electrical installations; and transportation. New material includes 60 new or revised fire safety standards adopted at the 1959 NFPA Annual Meeting, and amendments approved by the NFPA Board of Directors up to and including July 30, 1959.

ASTM STANDARDS RELATING TO COATED AND UNCOATED IRON AND STEEL SHEET AND STRIP, A-1, A-5. 1959. 148 *pp. American Society for Testing Materials,* 1916 *Race Street, Philadelphia* 3, *Pa.* $3.00. *There are* 21 standards in this compilation, which is issued for the first time. The volume includes 11 specifications for steel sheet and strip, 3 specifications for metallic coated steel sheet, 2 specifications for wrought iron sheet, and one specification for metallic coating materials. In addition there are 4 methods of test.

. . . Questions

The minimum nominal mean thickness of the trapezoid section of a spring lock washer is T + t over 2, according to American Standard B27.1-1958. The maximum thickness is the specified minimum thickness plus the corresponding tolerance listed for the respective size. For example, in the case of ¼-in. nominal medium washer, the maximum mean thickness is 0.072; minimum mean thickness 0.062. What is the recommended procedure for checking this mean thickness? Why are the thicknesses for inner periphery T and outer periphery t not given? Is the tolerance on thickness given on a line parallel to the surface forming the width? If so, what is the recommended tolerance for washers above nominal 1½-in?

In reply to these questions, the chairman of Sectional Committee B27 reports as follows:

The plus tolerance for the nominal mean thickness was one of the last items added to the new spring lock washer standard. In the earlier edition of the standard it had been anticipated that manufacturers would draw wire sections at or near the minimum mean thickness and that the wire drawing dies would have been worn out with respect to shape long before there had been any appreciable increase in the mean thickness. This is still true. However, the subcommittee that developed the new edition of the standard realized that it would be possible for a supplier accidentally to substitute a heavy or extra heavy washer for a medium washer and thereby complicate the assembly for which the washer was intended. Accordingly, the committee added general tolerances for the nominal mean thickness. These tolerances bear little or no relationship to the normal wear on wire drawing dies.

Assuming the thickness of the ¼-in. medium washer mentioned in the question to be at the minimum mean value of 0.062, the thickness at the outer periphery could vary from 0.0585 to 0.06025. The thickness at the inner periphery could vary from 0.0655 to 0.06375. (These ranges are obtained by using the minimum taper of 0.0035 across the width of the section and the maximum taper of 0.007 across the section.) The mean will exist only where the figures derived from the maximum and minimum taper are correlated. Taking the 0.0585 outer periphery thickness in combination with the 0.06375 inner periphery thickness will result in a mean thickness of less than 0.062. The figures 0.06025 and 0.0655 could be combined, however, resulting in a taper of the section between limits but with a mean somewhat greater than 0.062. A small amount of taper is essential to prevent spreading of the lock washers during tightening; however, excessive taper causes imbedding of the washer and destruction of internal threads.

The section dimensions may be measured by cutting a radial section through the washer.

Either surface may be used as a basis for the mean thickness.

The subcommittee apparently overlooked the fact that the diameter range of the lock washers had been increased beyond 1½. However, as noted above, the tolerance on thickness is intended only to prevent substitution of the next heavier duty washer. It is suggested that a plus tolerance of 0.030 be used for lock washers beyond 1½.

Is the Association of American Railroads making progress in eliminating conflicts between design specifications and material specifications? For example, an AAR specification, which makes mandatory the number and size of bolts in a given joint, based on using low carbon steel, puts an economic block on using modern, standard, high-strength bolting. With the latter, economies could be gotten by reducing size of bolts, or number of bolts, or both, with gains in static and fatigue strength.

Items which involve both design specifications and material specifications may be handled jointly by the AAR committees concerned. Recommendations are then made to the General Committee. For example, if the Committee on Car Construction of the Association of American Railroads should feel that there is an advantage in using special alloy steel for bolts or other car parts, then action is required by the Committee on Specifications for Materials to revise material specifications accordingly. All such changes in standards are then subject to letter ballot vote by the entire AAR membership for final approval. We feel that progress is being made in expediting those matters which involve action by more than one committee.

—Reply by M. C. Nystrom, Southern Pacific Company, to question asked at a National Conference on Standards.

STANDARDS FROM OTHER COUNTRIES

Members of the American Standards Association may borrow from the ASA Library copies of any of the following standards recently received from other countries. Information about those standards not selected for listing in THE MAGAZINE OF STANDARDS may also be obtained from the ASA Library. Orders for these standards may be sent to the country of origin through the ASA office. Titles are given here in English, but documents are in the language of the country from which they were received. For the convenience of readers, the standards are listed under their general Universal Decimal Classification number. In ordering copies of standards, please refer to the number following the title.

003.62
SIGNS, NOTATIONS, SYMBOLS

France (AFNOR)

Physical-chemical symbols NF X 02-108

USSR

Basic graphic symbols used in automatic process diagrams GOST 3925

534
ACOUSTICS, SOUND, VIBRATIONS

Germany (DNA)

Standard pitch. Tuning fork DIN 1317
Sound intensity, definition DIN 1318
Pitch measured with electric instrument DIN 45 402
Acoustics, general terminology DIN 1320

United Kingdom (BSI)

Characteristics and method of test of air-conduction hearing aids using electronic amplification BS 3171:1959
Frequency characteristics for magnetic sound recording on film BS 3154:1959

54 CHEMISTRY

France (AFNOR)

Apparatus for distillation of aromatic hydrocarbides NF T 67-101
Laboratory glassware. Cocks of current usage NF B 35-028
Laboratory burettes with cocks NF B 35-301
3 stds for methods of analysis of different surface active agents NF T 73-011/3
Colorimetric method for determination of iron contents in water NF T 90-017

Germany (DNA)

2 stds for different faucets for burettes DIN 12560/1
Burettes with colored strips DIN 12701

Rumania (OSS)

3 stds for chemical laboratory apparatus STAS 5945/7-58

United Kingdom (BSI)

Laboratory potentiometric pH meters BS 3145:1959

614.84 FIRE BRIGADE

Belgium (IBN)

Fire-fighting hand pump NBN 514

Germany (DNA)

2 stds for fireman's belt with hooks for equipment DIN 14923

India (ISI)

Fire hose delivery couplings, branch pipe, nozzles and nozzle spanner IS:903
Branch with revolving head for fire-fighting purposes IS:906
Suction hose for couplings for fire-fighting purposes IS:902
Rubber-lined, woven-jacketed hose for use in general fire-fighting service IS:636
Underground hydrant, sluice-valve type IS:909

Israel (SII)

Carbon tetrachloride portable extinguishers operated by hand pump S.I. 51
Portable soda-acid fire extinguishers S.I. 74
Carbon dioxide portable extinguishers S.I. 318

Rumania (OSS)

Fire and explosion warning indicators STAS 1441-58
Fireman's safety belt STAS 5920-58

621.791
WELDING AND ALLIED TECHNIQUES

Australia (SAA)

SAA code for pipe welding CB.15-1959

Germany (DNA)

Soft p.v.c. welding, rules for DIN 16931

621.88
MECHANICAL ATTACHMENT AND FIXING

France (AFNOR)

Reduced hexagonal or square head bolts PN E 27-111
Gaging the screw threads. General rule for NF E 03-101
Survey of letter symbols for screws, bolts, etc NF E 27-001
Summary of classification of commercial bolts, etc NF E 27-002
Commercial bolts, studs, etc, general NF E 27-025
Stove bolts NF E 27-128

Germany (DNA)

Coupling nuts for railways and automobiles DIN 43162
Stage-board hand screws DIN 56922
Go-gage for metric screw thread from 1-100 mm diameters DIN 2285
3 stds for sheet metal screws with different cross recessed heads DIN 7981/3
4 stds for screws, metric, with different cross recessed heads DIN 7985/8
3 stds for wood screws with different cross recessed heads DIN 7995/7

India (ISI)

General plan for metric screw threads with ISO profile IS:1330

Netherlands (NNI)

Trapezoidal screw thread. Metric fine NEN 1288
Trapezoidal screw thread. Metric NEN 1311

Rumania (OSS)

2 stds for gages for outside and inside screw threads of ISO profile STAS 5759/60-58
Tolerance tables for Whitworth screw thread STAS 5856-58

Sweden (SIS)

2 stds for external and internal retaining rings SMS 1581/2
Rivets, 1-8 mm diameter, general requirements SMS 1651
Box-end and socket wrenches. Test and material requirements SMS 1657
Screw drivers with plastic handles SMS 1658
Metric coarse screw thread profile SMS 2
ISO screw thread profile SMS 1701
2 stds unified screw thread (UNC), tolerance class 1, 2 and 3 SMS 1719/20

Switzerland (SNV)

Cylindrical pins VSM 12717
Keys for hexagonal socket head cap screws and socket set screws VSM 35920
3 stds hexagonal socket head cap screws, fully and partly threaded, Whitworth, 1-2 in. VSM 12180/1
3 stds hexagonal socket head cap screws fully and partly threaded, metric M3-M62 VSM 12182/3

United Kingdom (BSI)

High strength friction grip bolts for structural engineering: Part 1: General grade bolts BS 3139:1959
Screw threads of unified form for spectacle frames including screwing taps and screw gauges BS 3172:1959

621.9
TOOLS, MACHINE TOOLS, MACHINING

Germany (DNA)

Set of rings for milling cutter cores DIN 2085
2 stds for center drills type A, B, R DIN 320, 333

Italy (UNI)

11 stds for different shape of single point cutting tools with carbide tips UNI 4101P/4111P

Sweden (SIS)

Tungsten carbide tips for cutters SMS 956
4 stds for circular saws for wood SMS 1301/4
Frame saw blades, tooth types SMS 1433

USSR

Helical plain milling cutters GOST 3752
Straight edge GOST 5641
Band presses for ceramics GOST 6113
Plates for tables of metal cutting lathes GOST 6569
Spiral end-mills GOST 9140
Direction of movement of lathe controls GOST 9146
Milling press, vertical GOST 9191
Double press, single action GOST 9222
Two-column hydraulic presses, individually driven GOST 9223
Spring winding machines GOST 9224
Crank shaft presses for sheet metal stamping GOST 9226
Knives for various paper cutting machines GOST 9228

624 CIVIL ENGINEERING

Canada (CSA)

Specification for concrete poles (not prestressed) A14.1-1959

Czechoslovakia (CSN)

Different types of scaffolding CSN 73 8110

Hungary (MSZH)

3 stds for wooden panelled doors: structural details MSZ 15905/7-58

629.13
AERONAUTICAL ENGINEERING. AIRCRAFT

Australia (SAA)

Australian std specification for aircraft material:
High-nickel, high-chromium valve steel U.31-Sept. 1959
40-ton, high thermal expansion steel U.32-Sept. 1959
55-ton, high chromium-nickel steel (corrosion resisting, limiting ruling section 6 in.) U.35-Sept. 1959

674 WOOD INDUSTRY

Czechoslovakia (CSN)

Wood working machinery. Classification and terminology CSN 49 6005
Logs for use in mines CSN 48 0080

Netherlands (NNI)

2 stds for different wooden extension ladders NEN 938, 1730
2 stds for white fir wooden stepladders NEN 3208/9

Poland

Wooden boxes and standard shooks PN D-79601
Wood wool, classification PN D-94000
Wood species used for pulp PN D-95002
2 stds for coniferous and deciduous pulp wood PN D-95007/8

Union of South Africa (SABS)

Standard specification for structural timber SABS 563-1958
Standard specification for wooden handles for hatchets SABS 672-1958

United Kingdom (BSI)

Wood blocks for floors BS 1187:1959

678.5 PLASTICS

Germany (DNA)

2 stds for pressed pieces and die castings for plastics, tolerances and admissible deviations DIN 7710
Determination of thickness of plastics DIN 53 370
Bend test of plastic sheets DIN 53 374
Light-fastness of plastics, test for DIN 53 388

Italy (UNI)

6 stds for different tests of vulcanized elastomers UNI 4189/94

Netherlands (NNI)

Determination of the viscous properties of diluted solutions of macromolecular materials. General directives NEN 5301

77 PHOTOGRAPHY AND CINEMATOGRAPHY

Czechoslovakia (CSN)

3 stds for transparency holder for projectors CSN 19 8820,-30/1
Adapters for lense filters CSN 19 6080

France (AFNOR)

Cut films, dimensions NF S 21-001
Exposure-time markings NF S 22-001
Lens aperture openings marking NF S 22-002
Lens barrels, dimensions of NF S 22-003
Shutter cable release tips and sockets NF S 22-004
Flash lamp connector NF S 22-005

Germany (DNA)

35 mm film size of negative and positive images, side ratio 1.375:1 DIN 15502
35 mm sound test film DIN 15506
16 mm film perforated on one or both edges. Size of negative and positive images DIN 15602
2 stds for projection glass slides DIN 108

Hungary (MSZH)

Flash lamp cable release MSZ 9653-58
Camera tripod, bolts and nuts MSZ 9671-58
Camera accessory shoes MSZ 9672-58
Hydroquinone, photographic grade MSZ 2285-58
Monomethyl-p-aminophenol sulphate, photographic MSZ 2286-58

USSR

2 stds for anamorphic attachment for moving picture projectors GOST 9039/40-59
Amateur moving picture projectors for 8-mm films GOST 9100-59
2 stds for 16- and 35-mm motion picture projectors, size and location of images GOST 2943/4
3 stds for 35-mm, 16-mm, and 8-mm motion picture films, dimensions and location of images on the film GOST 9214/6
8-mm motion picture projector, dimension and location of projected image GOST 9217
Photo reproduction apparatus, types and basic dimensions GOST 3143
Method of sensitometric testing of color film GOST 9160

News Briefs...

• TWO DRAFT RECOMMENDATIONS for machine tools are now ready for final approval as ISO Recommendations, and four others are ready to be submitted to member-bodies of the International Organization for Standardization.

This is the result of work done by ISO Technical Committee 39, Machine Tools, at its meeting in Paris, France, September 23, 1959. This was the committee's sixth meeting and followed immediately the sixth European Machine Tool Exhibition, Paris, September 12-21.

The two Draft ISO Recommendations which are now ready to be submitted to the ISO Council for final approval deal with lathe tool posts and with speeds and feeds for machine tools.

The four new Draft ISO Recommendations deal with 5 percent tapers for tool shanks (Morse, metric, and Brown & Sharpe tapers,) lathe centers, 7/24 tapers, and symbols appearing on the machines.

The committee will continue its study of the direction of operation of controls, T-slots, hub flanges for mounting grinding wheels on machines, spindle noses for lathes, driving squares, and cotter slots for Morse tapers.

L'Ingenieur General P. Salmon, Commissioner for Standardization, French Ministry of Industry and Commerce, was chairman of the meeting. The standards bodies of 13 participating countries were represented: Czechoslovakia, France (secretariat), Germany, Hungary, India, Italy, Netherlands, Poland, Sweden, Switzerland, United Kingdom, United States, and USSR. Japan, an observer member, also had a delegate present, and an observer attended on behalf of the International Electrotechnical Commission.

The committee plans to hold its next meeting in New York in September 1960, in connection with the triennial American Machine Tool Exhibition.

A. William Meyer,[1] Brown & Sharpe Mfg Company, USA representative at the TC 39 meeting, commented on the heavy program of work that had to be compressed into the three-day meeting. The next meeting should be scheduled for an entire week, he recommended.

Among new subjects suggested for action by TC 39 were a number on which Mr Meyer believes the U.S. viewpoint should be determined and presented to the committee. These include: (1) addition of No. 45 taper to an ISO proposal on machine tapers; (2) standardization of ends of grinding wheel spindles; (3) standards for collets for lathes; (4) standardization of chuck plates and back plates for lathes; (5) standardization of spindle noses of drilling machines; (6) reduction and extension collets for drilling machines.

"As to U.S. representation," Mr Meyer said, "I regret that I could not have an associate for consultation and for sitting in at conferences which were held simultaneously with the main meeting. Occasions arose where I chose to stay in the main meeting, catching up on conference results during lunch periods, etc. Even so, on one occasion where U.S. representation was urgent at two places, the chairman graciously delayed the main meeting for a half hour so I could advise on the U.S. position."

[1]Mr Meyer represents the National Machine Tool Builders' Association on Sectional Committee B7, Safety Code for Use, Care, and Protection of Abrasive Wheels, and is member-at-large on Sectional Committee B4, Allowances and Tolerances for Cylindrical Parts and Limit Gages, and on Sectional Committee B5, Small Tools and Machine Tool Elements.

• INFORMAL ARRANGEMENTS have been completed for holding the fourth plenary meeting of the International Organization for Standardization's Technical Committee 38 on Textiles in England, May 19-28. Two subcommittees, No. 5 on yarn testing and No. 6 on fiber testing, are also tentatively scheduled to meet then. Working Group 1 of Subcommittee 6 on cotton fiber tests will meet immediately prior to the plenary meeting. Secretariat for Subcommittee 5 and Working Group 1 is held by the USA. ASA Sectional Committee L23 supervises these activities and is now recruiting an American delegation for the meetings.

• HENDLEY BLACKMON, Westinghouse Electric Corporation, took office as president of the U.S. National Committee of the International Electrotechnical Commission January 1, succeeding R. C. Sogge. Mr Blackmon had served as first vice-president in 1959.

Hendley Blackmon

Virgil M. Graham, Electronic Industries Association, became first vice-president, having served as second vice-president last year. W. A. McAdams, General Electric Company, Schenectady, N.Y., became second vice-president.

Mr Blackmon is also serving as chairman of ASA's Electrical Standards Board, with Mr Graham as first vice-chairman, and M. H. Pratt, vice-president and chief engineer, Central Division, Niagara Mohawk Power Company, as second vice-chairman.

W. A. McAdams

M. H. Pratt

Virgil M. Graham

• THE "CHICKEN OR THE EGG" deadlock between manufacturers of building equipment and supplies and architects on which comes first, modular materials or the demand for modular materials, has been broken. H. Dorn Stewart, president of Producers' Council, expressed this opinion at a session on modular coordination held during the three-day meeting of the Building Research Institute in Washington, November 17-19. The deadlock has been broken because the building industry is not static and in the changing of products, new ideas are being put into effect, Mr Stewart explained. One major manufacturer of appliances, he said, expects his complete line of current production items to be superseded in seven years. This dynamic changing of patterns has been experienced by almost all manufacturers in the building industry, Mr Stewart declared. The effect on use of the modular method is evident in the use of Portland Cement in dimensional precast units, for example, which is now several times as great as it was in 1945. In addition, a tremendous quantity of cement is used in poured-in-place flooring and decking on modular steel panels, Mr Stewart pointed out.

Recent predictions have indicated that within ten years retail lumber dealers will be in the business of handling modular components or will be out of business, Mr Stewart said. Already there are 1600 authorized dealers using the method.

The change toward modular methods is shown in the fact that new modular bathtubs were introduced in 1958 and 1959 by three different companies. Two steel producers recently introduced modular panels and components for school applications. Three major companies will be introducing finished wall panels into the 1960 residential market. Mr Stewart also mentioned modular window assemblies, new forms of modular masonry units, modular lighting, modular participation systems, and modular appliances, such as unit air conditioners.

Also presented at the session was a paper on the history of the A62 modular standards being developed by a sectional committee organized under the procedures of the American Standards Association and sponsored by the American Institute of Architects, the Producers' Council, the National Association of Home Builders, and the Associated General Contractors of America. The paper was presented by C. E. Silling, of C. E. Silling & Associates, chairman of Committee A62.

The teaching of modular measure in schools of architecture was discussed by D. Kenneth Sargent, dean of the School of Architecture at Syracuse University. Byron Bloomfield, executive director of the Modular Building Standards Association, discussed the association's work and presented the results of a questionnaire sent out to architects of all new projects estimated at $50,000 or more reported in March 1959. Of 1713 questionnaires distributed, 918 were returned. Eleven percent replied that they used "modular drafting" for their working drawings on these projects. Only 37 percent of those replying had ever tried modular dimensioning, however, although 85 percent of those who had tried it were continuing to use it.

• THE NATIONAL BUREAU of Standards announces it has expanded its pressure standards program to develop improved standards and techniques for measuring very high pressures. Changes in the properties of materials will be studied to provide more precisely determined calibration points on the pressure scale, and techniques for measuring high pressure will be investigated.

High pressures offer great promise in treating new materials to meet some of the most severe military and industrial requirements. For example, high pressures cause chemical changes that form new compounds such as polyethylene and boron nitride, and crystalline changes such as occur when graphite is changed to diamond, or quartz to Coesite.

• WITH THE AVAILABILITY and knowledge of radioisotopes increasing every day in American industry, it is only a matter of time before the American Society for Testing Materials adopts standards and test methods for its use. The Symposium on Applied Radiation and Radioisotope Test Methods at the ASTM Third Pacific Area National Meeting in San Francisco, October 12-16, was held to focus attention on several procedures using radioisotopes that might be adopted as ASTM standards.

ENGINEER

STANDARDS

ME or EE preferred with minimum of 5 years experience in review, evaluation & selection of electronic components for military & commercial applications.

Established program for standardization of components to be used to fill engineering design requirements. Must be well versed in manufacturing techniques of electronic assembly and fabrication procedures.

Excellent growth potential with established & rapidly expanding electronic organization. Liberal fringe benefits & pleasant suburban living.

In confidence send detailed resume & salary requirements to MR WILLIAM SYLVESTER

ACOUSTICA ASSOCIATES

Fairchild Court

Plainview, L.I., N.Y.

Among these were a program of radioactive ring wear testing in Diesel locomotives, sponsored jointly by the Southern Pacific Company, the Standard Oil Company of California, and the California Research Corporation; a portable instrument for measuring soil moisture and density, developed by the Nuclear Chicago Corporation as the result of a contract with the Corps of Engineers; use of a calcium-45 tagged clay dispersed in lubricating oil as the test soil for a laboratory test for performance of laundry detergents; and a faster method of chemical analysis for magnesium.

• FOR THE FIRST TIME in some years, the Graphic Standards Board of ASA has a vice-chairman as well as a chairman. He is Anderson Ashburn, managing editor of *American Machinist*. Mr Ashburn will work with Harold Westman who continues as chairman of the Board. Mr Westman is editor of *Electrical Communication*, International Telephone and Telegraph Company.

Anderson Ashburn

Mr Ashburn has been employed by McGraw-Hill Publishing Company, with *American Machinist* magazine, since 1942, except for military leave. He has been managing editor since 1955.

During the war he was with the editorial branch, Ordnance School, Aberdeen Proving Ground, Maryland, and became chief of the branch. He edited the *Ordnance Handbook*, and wrote Ordnance School texts, including *Automotive Troubleshooting and Storage Batteries*. During the Korean War he established a branch school in Chicago for training army machinists and served on the board which developed the Army Field Forces maintenance program.

He is vice-president and chairman of Production Activity, Society of Automotive Engineers, and chairman of Technical Committee 1 on T-slots of Sectional Committee B5 on Small Tools and Machine Tool Elements.

• A REVISED EDITION of American Standard Rotating Air Cylinders and Adapters, B5.5-1959, has just been issued to supersede B5.5-1954. The method of dimensioning radial hole locations has been changed to follow the principle set forth in American Standard Drafting Manual on Dimensioning and Notes, Y14.5-1957, to insure interchangeability. In addition, minor changes have been made in the tables, where possible, to permit design of lighter and shorter cylinders reflecting the modern trend toward higher rotating speeds.

• QUALITATIVE YARDSTICKS for evaluating the ablation resistance of materials are badly needed, it was revealed at a symposium on thermal ablation,[1] held at the Third Pacific Area National Meeting of the American Society for Testing Materials at San Francisco, October 12-16. A search is being made to find suitable materials which, through ablation, can offer thermal protection to such areas as nose cones and rocket exhaust housings of space vehicles.

[1] The process by which surface particles, layer by layer, turn directly from solid to gas, continuously carrying off heat that would otherwise be absorbed by the material.

As an indication of the need for standard tests, Herzog and Donaldson of the U. S. Naval Ordnance Test Station, China Lake, Calif., emphasized the critical need for a reliable short-time test to evaluate materials for rocket nozzles and nose cone insulators. Without such a test, they said, the materials engineer has found it difficult to instill confidence in the missile designer who, as a result, feels obligated to test materials in actual missile structures. Obviously, little can be learned from time-consuming and costly one-shot tests, they explained.

• T. E. VELTFORT, manager of the Copper and Brass Research Association, was re-elected chairman of the Standards Council for 1960, with Harold Massey, managing director, Gas Appliance Manufacturers Association, Inc, as vice-chairman.

Members of the Board of Review for 1960 are:

Hendley Blackmon, Westinghouse Electric Corporation
J. S. Fassett, American Hotel Association
Earl L. Ghaster, Jr, Outdoor Advertising Association of America
E. R. Granniss, Royal-Globe Insurance Group
C. M. Heinen, Chrysler Corporation
E. O. Mattocks, American Petroleum Institute
C. W. Franklin, Consolidated Edison Company of New York ,alternate)

• THE NATIONAL BUREAU OF STANDARDS has decided to follow the recommendations of the International Committee on Weights and Measures to use new prefixes for denoting multiples and sub-multiples of units. The committee adopted the prefixes at its meeting in Paris in the fall of 1958. In addition to the eight numerical prefixes in common use, which are given in the table below, the committee expanded the list by adding the four prefixes marked with an asterisk. Thus, for example, 10^{-12} farad is called a picofarad, and is abbreviated 1 pf.

Multiples and Sub-Multiples	*Prefixes*	*Abbreviation*	*Pronunciation*
1 000 000 000 000 = 10^{12}	tera*	T	tĕr′á
1 000 000 000 = 10^{9}	giga*	G	jĭ′gá
1 000 000 = 10^{6}	mega	M	
1 000 = 10^{3}	kilo	k	
100 = 10^{2}	hecto	h	
10 = 10	deka	dk	
0.1 = 10^{-1}	deci	d	
0.01 = 10^{-2}	centi	c	
0.001 = 10^{-3}	milli	mu	
0.000 001 = 10^{-6}	micro	u	
0.000 000 001 = 10^{-9}	nano*	n	nā′nō
0.000 000 000 001 = 10^{-12}	pico*	p	pī′cō

AMERICAN STANDARDS

Just Published . . .

If your company is a member of the American Standards Association, it is entitled to receive membership service copies of these newly published American Standards. The ASA contact in your company receives a bimonthly announcement of new American Standards, which also serves as an order form. Find out who your ASA contact is and order your American Standards through him. He will make sure your company receives the service to which it is entitled.

BUILDING AND CONSTRUCTION

Door and Frame Preparation for Door Locks and Flush Bolts, A115-1959; Mortise Door Locks, A115.1-1959; Bored or Cylindrical Locks for 1 3/8 Inch Doors, A115.2-1959; Bored or Cylindrical Locks for 1 3/8 Inch Doors, A115.3-1959; Lever Extension Flush Bolts, A115.4-1959
(Bound together) $1.50

Sponsor: National Builders' Hardware Association

Areas in Hospitals and Related Facilities, Method of Determining, Z65.4-1959 $0.50

Sponsors: National Association of Building Owners and Managers; Office of Education, Dept. of Health, Education and Welfare

ELECTRIC AND ELECTRONIC

Distribution, Power, and Regulating Transformers and Reactors Other Than Current-Limiting Reactors, Requirements, Terminology, and Test Code for: Section 20—Overhead-Type Distribution Transformers, 67,000 Volts and Below, 500 kva and Smaller, C57.12.20-1959 (Revision of C57.12.20-1958) $2.30

Electrical and mechanical features of single and three-phase, 60 cps, mineral-oil-filled, overhead-type distribution transformers, rated 500 kva and smaller; high-voltage, 67,000 v and below; low voltage, 15,000 v and below.

Sponsor: Electrical Standards Board

MATERIALS HANDLING

Metal Drums and Pails, Specifications for, MH2.1-1959 through MH2.10-1959 (Revision of MH2.1-1958 through MH2.10-1958) $1.00

Dimensions, tolerances, and details of construction of steel containers ranging in size from 55 (U.S.) gallon drums to 5 (U.S.) gallon pails.

Sponsor: Steel Shipping Container Institute

SAFETY

Safety Code for Head, Eye, and Respiratory Protection, Z2.1-1959 (Revision of Z2-1938) $3.00

Reasonable and adequate means and methods for the proper selection and safe use of head, face, neck, eye, and respiratory protective equipment for use in all operations or processes (occupational), excluding those relating to (1) communicable air-borne diseases, or (2) x-rays, gamma-rays, and high-energy particulate radiations such as alpha, beta, or neutron rays.

Sponsors: Department of the Navy; National Bureau of Standards; U.S. Bureau of Mines

In Process . . .

ACOUSTICS, VIBRATION, AND MECHANICAL SHOCK

American Standards Approved

Preferred Frequencies for Acoustical Measurements, S1.6-1960

Sponsor: Acoustical Society of America

DRAWINGS, SYMBOLS AND ABBREVIATIONS

American Standards Approved

Time Series Charts, Y15.2-1960 [Revision of Z15.2-1938 (R1947)]

Sponsor: American Society of Mechanical Engineers

ELECTRIC AND ELECTRONIC

American Standards Approved

Code for Protection Against Lightning, Part I, Protection of Persons, C5.1-1959; Part II, Protection of Buildings and Miscellaneous Property, C5.2-1959; Part III, Protection of Structures Containing Flammable Liquids and Gases, C5.3-1959 (Revision of C5.1-1953, C5.2-1953; C5.3-1953)

Sponsors: National Fire Protection Association; National Bureau of Standards; American Institute of Electrical Engineers

Industrial Control Apparatus, C19.1-1959 (Revision of C19.1-1943)

Sponsors: American Institute of Electrical Engineers; National Electrical Manufacturers Association

72-Inch (800 and 1000 Milliampere) T-12 Rapid-Start Fluorescent Lamps, Dimensional and Electrical Characteristics of, C78.701-1959 (Consolidation and revision of C78.701-1956 and C78.703-1958, 2nd edition)

96-Inch (800 Milliampere) T-12 Rapid-Start Fluorescent Lamps, Dimensional and Electrical Characteristics of, C78.702-1959 (Revision of C78.702-1958, 2nd edition)

96-Inch (1.5 Ampere) T-12 and PG-17 Rapid-Start Fluorescent Lamps, Dimensional and Electrical Characteristics of, C78.707-1959

Sponsor: Electrical Standards Board

Methods for the Determination of the Elastic, Piezoelectric, and Dielectric Constants — The Electromechanical Coupling Factor of Piezoelectric Crystals, 58 IRE 14.S1; ASA C83.23-1960

Sponsor: Electronic Industries Association

In Board of Review

Electrical Insulating Oils, Methods of Testing, ASTM D 117-58; ASA C59.2- (Revision of ASTM D 117-54T; ASA C59.2-1955)

Sheet and Plate Materials Used for Electrical Insulation, Methods of Testing, ASTM D 229-58; ASA C59.13- (Revision of ASTM D 229-49; ASA C59.13-1951)

Power Factor and Dielectric Constant of Electrical Insulating Oils of Petroleum Origin, Methods of Test for, ASTM D 924-58; ASA C59.22- (Revision of ASTM D 924-49; ASA C59.22-1951)

Plastics and Electrical Insulating Materials for Testing, Methods of Conditioning, ASTM D 618-58; ASA C59.28- (Revision of ASTM D 618-54; ASA C59.28-1955)

Sponsor: American Society for Testing Materials

In Standards Board

Electrical Power Insulators, Test Methods for, C29.1-(Revision of C29.1-1944)

Sponsor: Electrical Standards Board

250-Watt BT-28 (H5) Mercury Lamp, Physical and Electrical Characteristics of, C78.1301-

175-Watt BT-28 (H22) Mercury Lamp, Physical and Electrical Characteristics of, C78.1308-

250-Watt BT-28 (H5) Mercury-Fluorescent Lamp, Physical and Electrical Characteristic of, C78.1315-

175-Watt BT-28 (H22) Mercury-Fluorescent Lamp, Physical and Electrical Characteristics of, C78.1316-

Sponsor: Electrical Standards Board

MECHANICAL

American Standard Approved

Ball and Roller Bearings, Identification Code for, B54.1-1960

Sponsor: Anti-Friction Bearing Manufacturers Association

In Board of Review

Milling Cutters, and Nomenclature for Milling Cutter Teeth, B5.3- (Revision and unification of B5.3-1950 and B5cl-1947)

Spindle Noses for Tool Room Lathes, Engine Lathes, Turret Lathes, and Automatic Lathes, B5.9- (Revision of B5.9-1954)

Sponsors: American Society of Tool Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; Society of Automotive Engineers; American Society of Mechanical Engineers

In Standards Board

Machine Tapers, B5.10- (Revision of B5.10-1953)

Sponsors: American Society of Tool Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; Society of Automotive Engineers; American Society of Mechanical Engineers

Reaffirmation Approved

Round Head Bolts, B18.5-1952 (R1959)

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

American Standard Withdrawn

Screw Threads for High-Strength Bolting, B1.4-1945

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

NUCLEAR ENERGY

In Standards Board

Radiation Symbol, N2.1-

Sponsor: Atomic Industrial Forum

OFFICE EQUIPMENT AND PROCEDURES

In Standards Board

Office-Type Dictating Equipment, Minimum Requirements for, X2.5.20-

Withdrawal Being Considered

Temple and Method of Attaching Dictating Machine Secretarial Hand Controls to Typewriters, X2.5.18-1954

PETROLEUM PRODUCTS AND LUBRICANTS

In Board of Review

Method of Test for Water and Sediment by Centrifuge, ASTM D 96-59T; ASA Z11.8- (Revision of ASTM D 96-48; ASA Z11.8-1948)

Distillation of Petroleum Products, Method of Test for, ASTM D 86-59; ASA Z11.10- (Revision of ASTM D 86-56; ASA Z11.10-1956)

Method of Test for Sulfur in Petroleum Products and Lubricants by the Bomb Method, ASTM D 129-58; ASA Z11.13- (Revision of ASTM D 129-52; ASA Z11.13-1952)

Lubricating Grease, Methods of Analysis, ASTM D 128-59; ASA Z11.16- (Revision of ASTM D 128-47; ASA Z11.16-1948)

Distillation of Gas Oil and Similar Distillate Fuel Oils, Method of Test for, ASTM D 158-59; ASA Z11.26- (Revision of ASTM D 158-58; ASA Z11.26-1955)

Dilution of Gasoline Engine Crankcase Oils, Method of Test for, ASTM D 322-58T; ASA Z11.29- [Revision of ASTM D 322-35; ASA Z11.29-1935 (R1953)]

Method of Test for Knock Characteristics of Motor Fuels by the Motor Method, ASTM D 357-59; ASA Z11.37- (Revision of ASTM D 357-58; ASA Z11.37-1958)

Distillation of Plant Spray Oils, Method of Test for, ASTM D 447-59T; ASA Z11.43- (Revision of ASTM D 447-57T; ASA Z11.43-1957)

Ramsbottom Carbon Residue of Petroleum Products, Method of Test for, ASTM D 524-59; ASA Z11.47- (Revision of ASTM D 524-58T; ASA Z11.47-1958)

Ash from Petroleum Oils, Method of Test for, ASTM D 482-59T; ASA Z11.54- (Revision of ASTM D 482-46; ASA Z11.54-1947)

Sulfated Residue, Lead, Iron, and Copper in New and Used Lubricating Oils, Methods of Test for, ASTM D 810-59; ASA Z11.57- (Revision of ASTM D 810-48; ASA Z11.57-1949)

Sediment in Fuel Oil by Extraction, Method of Test for, ASTM D 473-59; ASA Z11.58- (Revision of ASTM D 473-48; ASA Z11.58-1949)

Butadiene Content of Polymerization Grade Butadiene and Butadiene Concentrate, Method of Test for, ASTM D 973-59; ASA Z11.66- (Revision of ASTM D 973-50; ASA Z11.66-1950)

Sulfated Ash from New Lubricating Oils, Method of Test for, ASTM D 874-59T; ASA Z11.68- (Revision of ASTM D 874-57T; ASA Z11.68-1957)

Method of Test for Knock Characteristics of Motor Fuels by the Research Method, ASTM D 908-59; ASA Z11.69- (Revision of ASTM D 908-58; ASA Z11.69-1958)

Acetylenes in Butadiene, Method of Test for, (Silver Nitrate Method), ASTM D 1020-59; ASA Z11.74- (Revision of ASTM D 1020-52; ASA Z11.74-1952)

Butadiene Dimer in Styrene Butadiene Concentrates, Method of Test for, ASTM D 1024-59; ASA Z11.79- (Revision of ASTM D 1024-53; ASA Z11.79-1953)

Carbonyl Content of Butadiene, Method of Test for, ASTM D 1089-59; ASA Z11.81- (Revision of ASTM D 1089-53; ASA Z11.81-1953)

Oil-Soluble Sodium Petroleum Sulfonates, Method of Analysis, ASTM D 855-56; ASA Z11.100-

Total Inhibitor Content (p-Tertiary-Butyl-Catechol) of Butadiene, Method of Test for, ASTM D 1157-59; ASA Z11.102-

Calcium and Barium Petroleum Sulfonates, Method of Analysis, ASTM D 1216-56; ASA Z11.103-

Effect of Grease on Copper, Method of Test for, ASTM D 1261-55; ASA Z11.104-

Mercaptan Sulfur in Jet Fuels, Method of Test for, (Amperometric Method), ASTM D 1323-56; ASA Z11.105-

Lead in New and Used Greases, Method of Test for, ASTM D 1262-55; ASA Z11.106-

Sponsor: American Society for Testing Materials

PHOTOGRAPHY

American Standard Approved

Threaded Lens Mounts for 16mm and 8mm Motion Picture Cameras, PH-22.76-1960 (Revision of PH22.76-1951)

Sponsor: Society of Motion Picture and Television Engineers

In Standards Board

Designating and Measuring Focal Lengths and Focal Distances of Photographic Lenses, Methods of, PH3.35- (Revision of Z38.4.21-1948)

Sponsor: Photographic Standards Board

Sheet Film and Plate Processing Tanks, Specifications for, PH4.2- (Revision of PH4.4-1952)

Photographic Trays, Specifications for, PH4.3- (Revision of PH4.3-1952)

Channel-Type Photographic Processing Hangers for Sheet Films and Plates, Specifications for, PH4.4- (Revision of PH4.4-1952)

Photographic Grade Sodium Acid Sulfate, Fused, Specifications for, PH4.105- (Revision of PH4.105-1952)

Photographic Grade Paraformaldehyde, Specification for, PH4.153- (Revision of PH4.153-1949)

Photographic Grade Sodium Ferrocyanide, Specification for, PH4.304-

Sponsor: Photographic Standards Board

PIPE AND FITTINGS

American Standards Approved

Cast Bronze Solder-Joint Drainage Fittings, B16.23-1960 (Revision of B16.23-1955)

Sponsors: American Society of Mechanical Engineers; Mechanical Contractors of America, Inc; Manufacturers Standardization Society of the Valve and Fittings Industry

Wrought-Steel and Wrought-Iron Pipe, B36.10-1959 (Revision of B36.10-1950)

Sponsors: American Society for Testing Materials; American Society of Mechanical Engineers

SAFETY

American Standard Approved

Industrial Accident Prevention Signs, Specifications for, Z35.1-1959 (Revision of Z35.1-1941)
Sponsor: National Safety Council

In Board of Review

Power Presses, Safety Code for, B11.1- (Revision of B11.1-1948)
Sponsor: National Safety Council

WOOD

In Standards Board

Ash in Wood, Method of Test for, ASTM D 1102-56; ASA O13.1-

Alpha-Cellulose in Wood, Method of Test for, ASTM D 1103-55T; ASA O13.2-

Holocellulose in Wood, Method of Test for, ASTM D 1104-56; ASA O13.3-O13.4-

Preparation of Extractive-Free Wood, Method for, ASTM D 1105-56; ASA

Lignin in Wood, Method of Test for, ASTM D 1106-56; ASA O13.5-

Alcohol-Benzene Solubility of Wood, Method of Test for, ASTM D 1107-56; ASA O13.6-

Ether Solubility of Wood, Method of Test for, ASTM D 1108-56; ASA O13.7-

One-Percent Caustic Soda Solubility of Wood, Method of Test for, ASTM D 1109-56; ASA O13.8-

Water Solubility of Wood, Methods of Test for, ASTM D 1110-56; ASA O13.9-

Methoxyl Groups in Wood and Related Materials, Method of Test for, ASTM D 1166-55T; ASA O13.10-
Sponsor: American Society for Testing Materials

NEWS ABOUT AMERICAN STANDARDS PROJECTS

H. Warner Dailey

Dailey Joins the ASA Staff

H. Warner Dailey has joined the staff of the American Standards Association to replace F. Crampton Frost as civil engineer in charge and secretary of the Construction Standards Board. Mr Frost has been promoted to the administrative staff of ASA to devote full time to membership development (see page 42).

Among the ASA projects for which Mr Frost has been administratively responsible are those under the Construction Standards Board and the Materials and Testing Standards Board. American Standards with which he has been concerned cover the fields of civil engineering and construction, ferrous and nonferrous metals, rubber, chemicals, petroleum, plastics, and wood.

Before joining ASA, Mr Dailey was an account executive with Organization Service Corporation, New York, servicing five diversified manufacturers' trade associations.

During World War II, Mr Dailey was for two years an industrial analyst on the tank and motor vehicle combat program of the War Production Board. With a commission in the U.S. Navy, he was assigned to the Navy Inspection Office in New York City and then in Newark, N.J.

Following his service career, Mr Dailey supervised plant and office renovation for Steel and Alloy Tank Company, Newark. Before the war, he held various sales and engineering posts with Westchester Lighting Company, Mount Vernon, N. Y.

A community chest fund drive worker and former Boy Scout committeeman, Mr Dailey lives with his wife, Dorothy, and son, Warner M., on Old Stone House Road, Bedminster, N.J. He is chairman of the committee for improvement of building and grounds of the St Bernards School Parents Association.

Code for Pressure Piping, B31—

Sponsor: The American Society of Mechanical Engineers

Interpretations submitted by the sponsor.

From time to time certain actions of Sectional Committee B31 are published for the information of interested parties. While these do not constitute formal revision of the Code, they may be utilized in specifications, or otherwise, as representing the considered opinions of the committee.

Pending revision of the Code for Pressure Piping, B31.1-1955, the sectional committee has recommended that ASME, as sponsor, and ASA publish selected interpretations so that industry may take immediate advantage of corresponding proposed revisions. Case 43 is published herewith as interim action of Sectional Committee B31 on the Code for Pressure Piping that will not constitute a part of the Code until formal action has been taken by ASME and by the American Standards Association on a revision of the Code.

CASE NO. 43

Inquiry: Paragraph 155, Section 1, of American Standard B31.1-1955 as now written appears unduly restrictive for high-pressure fuel oil piping in requiring that it be designated as for saturated steam at the operating pressure.

May the design of such systems, using only steel components, utilize those components covered by American Standard B16.5-1957 at the pressure-temperature ratings given therein, using the actual fluid temperature as the design temperature?

Reply: It is the opinion of the committee that fuel oil piping using only steel components may be designed to utilize those components under the adjusted pressure-temperature ratings of B16.5-1957, using the actual fluid temperature as the design temperature.

Decimalization of the Inch—

The American Society of Tool Engineers recently asked the American Standards Association to organize a sectional committee under the jurisdiction of the Mechanical Standards Board to study adoption of the decimalized inch. The ASTE request

was presented for consideration at the Standards Council meeting December 9, 1959. During the discussion it was suggested that the problem be studied as one of broad general application rather than as confined only to the mechanical field. The Council voted that the ASTE proposal be referred to the Mechanical Standards Board with the understanding that the other standards boards will be kept advised so they may cooperate if they wish to do so.

Data-Processing Equipment, and Office Machines—

Organization of two new projects was recommended by a general conference which met in New York January 13. One would cover data-processing machines (including digital computers); the other would provide standards for office machines. The conference also recommended U. S. participation in international activities on the same subjects.

The scope of the proposed project on data-processing machines, as recommended by the conference, would cover:

"A single standard for logical representation of characters and character format in the media used for interchange of instruction, data, and control information between data-processing equipments, together with orderly provision for expansion and alternatives. Standard terminology and definition of data-processing operations and functions."

Scope of the proposed project on office machines was recommended by the conference as:

"Standardization of terminology and definitions of functions of office machines. Standardization of other fundamental elements of interest to users and manufacturers, such as output formats."

The conference recommended the Office Equipment Manufacturers Institute as sponsor for both proposed projects.

The recommendations of the conference are being submitted to the Miscellaneous Standards Board of ASA for action.

It has been explained that the scope of the proposed project for data-processing machines covers an area of activity which can be termed "logical systems standardization." It could lead eventually to standardization of related hardware. Systems standardization covers standards concerned with operation of a group of machines as a single system or of several different systems with one another, as in the interchange of information.

There would be four principal parts in this project: (1) A standard set of characters and coded representation for the character set, including the alphabet, numbers, special symbols, and marks by which information is made readable by means of the machines. (2) A standard format for defining the meaning of strings of characters into data fields, data, records, program instructions, and the like. (3) A common problem-oriented programming language governing the operation of data-processing equipment. This programming language would be independent of any particular machine so that it would be applicable to data-processing equipment of various manufacturers. Its purpose would be to establish a common language for data processing for use in describing the processes to be carried out. (4) Precise definition of data-processing operations at machine level to insure identical results for different equipment when using the problem-oriented language.

The proposed standards would provide a basis for passing information from one data-processing system to another, for performing the same process on differing machines, and for reducing the effort that goes into preparing programs describing data processing.

There would also be four principal parts in the project on office machines, all with the aim of providing a basis for common end use of the output of the machines. These would cover: (1) Standard terminology and definitions. (2) Standard output formats defining spacing distances. (3) A standard set of characters and symbols for alpha-numeric presentation. (4) Standardization of other fundamental elements of interest to users and manufacturers.

The international activities in which the conference recommended U.S. participation are a new project on office machines set up recently by the International Organization for Standardization, and an international round table conference on digital computers and data-processing equipment. The project on office machines, identified

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as ISO Technical Committee 95, is under the secretariat of the Italian standards organization.

The international conference on computers, proposed by the International Electrotechnical Commission at the request of the Swedish National Committee of IEC, is in the planning stage. No date or place has been set. It is expected, however, that the conference will discuss the possibility of an international code, or machine language, by which information is fed to data-processing equipment and digital computers. With such a standardized code, data programmed for one computer could be used in any other computer, without having to be recoded.

Metallic Storage and Processing Tanks—

Organization of a sectional committee to develop standards on vertical and horizontal tanks for processing and storage was recommended by a general conference December 18, 1959. The Chemical Industry Advisory Board had requested that a conference be called to consider whether such a project should be initiated.

The conference proposed a title for the suggested project to read "Standardization of Shop-Fabricated Metal Storage Tanks," and recommended that the Manufacturing Chemists' Association and the American Society of Mechanical Engineers be invited to accept co-sponsorship.

The scope recommended by the conference reads:

"The development of standards for shop-fabricated vertical and horizontal metallic storage and processing tanks which are used by the chemical industry (in plant use only)."

Further details to be considered in the scope were also recommended, including determination of the minimum practical number of incremental capacities to cover economically the range of 100 to 30,000 gallons; economical physical dimensions for length and diameter for both vertical and horizontal tanks; specifications for materials; definitions and nomenclature; appurtenances such as sight glass, vents, and ladders; minimum design and construction specifications; and incorporation of existing codes and standards wherever possible.

The recommendations of the conference will be submitted to the Mechanical Standards Board for action.

DINNSA

by CYRIL AINSWORTH

IN THIS COLUMN last month the discussions of the various methods for the development and approval of standards as American Standards were completed. Now, all the basic rules for the operation of ASA machinery have been examined. Similar explanations have been made in speeches, papers presented before individual groups, correspondence, and personal discussions. Knowledge of ASA operations is increasing. It is hoped that this column has helped to bring about greater understanding of them.

Throughout the entire history of ASA, some individuals and organizations have pointed a finger of accusation at ASA as an activity duplicating the work of other national groups and engaging in competition with them. It is difficult at times for individuals and organizations to understand that ASA does not formulate standards.

The Proprietary and Existing Standards Methods, in particular, furnish dramatic proof—first, that ASA does not duplicate the work of any other organization; second, that ASA is not in competition with any organization; and third, that ASA does not formulate standards. These facts are equally applicable to the Sectional Committee Method, but because sectional committees from a procedural point of view are known as "ASA sectional committees," confusion sometimes exists. As a result, the opinion is formed that ASA develops standards, thereby duplicating the work of other organizations that have standards-formulating programs.

Earlier in these columns presenting ASA policies and procedures, the judicial procedures were particularly emphasized. The approval of standards is the judicial process of determining the existence of a national consensus of acceptance of provisions submitted to ASA by a national organization, a national conference, or a sectional committee. If ASA formulated standards, it would find itself in the position of passing judgment on its own work. Such a position would be untenable.

Connected with this phase of ASA operations is the use of the term "American Standards" as opposed to "ASA standards." The latter term is constantly used and its incorrectness needs to be emphasized over and over again. If ASA formulated standards, the term would be appropriate, but since this is not the case, the term should never be used.

The term "American Standard" means that the standard is supported nationally by those substantially concerned. The standard is not the property of ASA. It belongs to everybody. The name "American Standards Association," therefore, logically comes from the designation "American Standard," and not vice versa.

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